

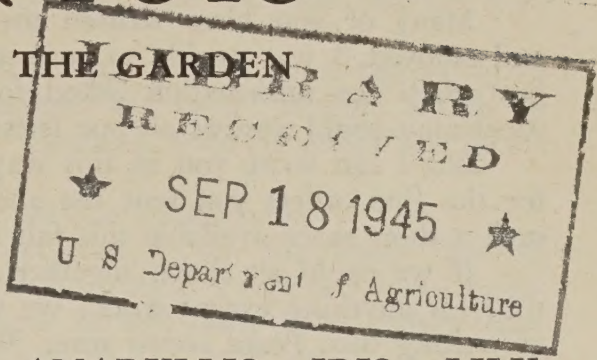
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BULBS FOR POTS

AND FALL PLANTING IN THE GARDEN



A CATALOG OF BULBS OF THE AMARYLLIS, IRIS, LILY, ORCHID, ARUM, OXALIS AND OTHER PLANT FAMILIES

Special Articles: A Personal Letter to You; How to Grow Amaryllis; How to Grow Bulbs in Pots; Discussions of Soils, Fertilizers, pH of Soils, etc. Culture Directions for All Bulbs.

FALL 1945

CECIL HOUDYSHEL

1412 THIRD ST.

LA VERNE, CALIFORNIA

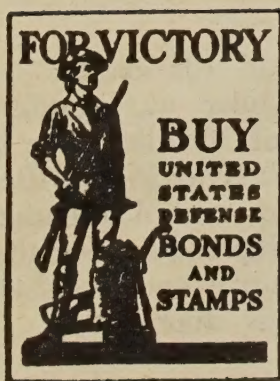
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A PERSONAL LETTER, — TO YOU

Dear Floral Friends:

Many of you have written me interesting letters which, altho much appreciated and enjoyed, I was unable to answer. There have been many who expected an answer but when the information asked for was in the catalog, I sent the catalog. Only a super-man could answer all our letters and I am definitely not super.

But I can write you in this way and this letter is to you, personally. I thank you for the fine orders you sent me and the many nice letters written. Sorry that I have such a short space available this fall in which to answer you.

If we could sit down together and had the time to talk, (it seems I never have time for anything except work) we would naturally talk first about Peace. On the date of writing this, Peace seems sure. When we celebrate, let us hope that we express our joy more by prayer and thanksgiving than by violence and noise. Let us give thought to those heroes who have given their lives or have suffered the injuries of battle and thus received handicaps to their entire future lives.

Let us hope and pray that it may not all have been in vain. But all humanity emerges from this war with an ugly scar and a grave handicap. We hate our enemies. Many will say, "Why should we not hate the Japs and the Germans?"

I have but a brief answer to that, will you not please read again the words of all the wise men of old. The wisest of all was Jesus. Read again Corinthians, Chapter 13. All that He said at any time regarding Hatred and Love.

My own conclusion is that if humanity is not bound together by the love of all our fellow men, force will not permanently maintain peace.

There are many influences that will aid in building better human relationships; family relationships; neighborhood relationships; the relationships of states, nations, races and classes. They are Religion, Education, Sobriety, Morality, Health, Science, Art and Security.

It is easy to find the place among these agencies where the love of flowers belongs. In fact, it is a supplement to every one of them. We need flowers every day of our lives. Flowers are not an extravagance. They are a necessity.

I must tell you again of a great grief that has come to me. My beloved daughter Eleanor died May 13. — She was the mother of Virginia Lee and Gordon Wayne, for whom I named the Crinums. Eleanor was a lover of all beautiful things and talented in creating beauty.

Sincerely,
Cecil Houdyshel

TERMS AND INSTRUCTIONS FOR ORDERING

Read the following carefully. It will avoid delay or misunderstanding.

Sales Tax. California customers must add 2½ % for state sales tax.

Order Early. Late planting is less favorable but better than not at all.

Remit with order by check or M. O. Currency or coins are acceptable but we are not responsible if lost. Stamps reluctantly accepted at 8% discount. Please do not ask for credit.

C. O. D. We do not ship C. O. D.

Postage prepaid on orders of \$1.00 or over. Under \$1.00 add 10c extra.

Insurance. Customers are urged to insure every order. Under war conditions, many orders are lost. We have had orders go astray in a distance of 30 miles. We have never lost one insured package. Costs little. Send 3c extra for values to \$5.00; 10c for values \$5.00 to \$25.00. Insure your order and it will receive more careful attention.

Express is much safer and is advised for large or valuable shipments especially in very cold weather in north. But it is usually a little more expensive and we ship by express only at your expense. We will add extra bulbs on express shipments.

Prices given are for one bulb unless otherwise stated. A dozen costs ten times the price of one. Six bulbs are sold at the dozen rate. If not otherwise priced, 100 bulbs are sold for the price of 7 doz., or 70 times the cost of one. Not less than 100 are sold at 100 rate. 50 are sold for the price of 4 doz.

Wholesale. Lack of labor has prevented us from digging enough of our bulbs to supply many at wholesale or to give discounts to dealers. We were therefore unable to publish a Wholesale Bulletin last year or this. Our quantity, prepaid prices are lower than some published wholesale prices.

Garden Club Bulletin is "out" for the duration, for the same reason.

Foreign Orders. Postage is prepaid if no greater than to our 8th zone. Best to remit a little extra. If too much we send extra bulbs. We cannot accept orders for bulbs at the 100 rate to be shipped abroad postpaid. We have several times filled orders from Mexico and other foreign countries, for *Gladiolus* bulbs at the 100 rate, only to find the postage required was almost equal to the price received.

Errors. Our packers make a few, not many. We want to correct them. Notify us at **once** in case of shortage or error. **Unpack** your order as soon as received. Don't wait two weeks, then tell us the bulbs were mouldy.

Partial Shipments. If all bulbs ordered are not included in the first package received, a colored slip informing you will be enclosed. Do not discard this with packing material. Pay attention and avoid correspondence for both of us.

Substitution. If out of a variety, we usually substitute one as near like it as possible, as good or better and of equal or greater value. If you do not approve this, say, "no substitution."

Guarantee. Our bulbs are true to name, and healthy. We do not, however, accept any responsibility for their performance after planting since we cannot control the conditions of their growth. If, in your opinion, our bulbs are not up to our specifications, please notify us at once when you receive them. But do not return them until we explain. Customers some times err in judgment and one returned dwarf *Baby Callas* because they were small. Another returned *Ranunculus* because they were too dry and dead looking.

Culture Directions are not sent with bulbs as all necessary information is given in this catalog.

Catalogs. **Spring Catalog** is mailed Jan. 15. **Fall Catalog Aug. 15.** If no orders are received for two years, names are dropped from our mailing lists. If you are no longer interested in bulbs, permanently or temporarily, please ask your postmaster to return this catalog at our expense.

Correspondence. We enjoy and appreciate the friendly letters we receive. We answer these twice a year in our **Introductory Letter**. I regret that I am unable to write individually to each. On some days in the busy season our first class mail will go over 250 pieces. At this time we must use our too small office force for packing bulbs and my time is almost wholly taken by supervision of ranch and my part of office work. No day's work is shorter than 10 hours and sometimes extends to 16 or even more.

We receive many requests for information about growing bulbs. This catalog is written to furnish that as well as to list the bulbs. Most inquirers show that the writer did not read the catalog as the very information asked for is in it.

We publish over 50,000 catalogs. The volume of correspondence has become greater than is possible for me to take care of. If you are obliged to ask a question enclose a self addressed post card for reply.

Identifying Bulbs. We can usually identify bulbs. Send flower, foliage and if possible, a bulb. Give all the facts known. Enclose self addressed post card. We do not undertake to identify horticultural varieties of *Gladiolus*, *Iris*, etc.

Time of Delivery. We deliver all bulbs within the correct range of time for planting or before. With a grave shortage of labor we have sometimes been less prompt than we like. But we have some new and experienced office help this fall and are prepared to get out orders more rapidly than last year.

Not all bulbs are ready to ship out on Sept. 1. We dig *Gladiolus* from Aug. to Oct.; *Callas* late Oct.; *Amaryllis* about Nov. 15. Items in the catalog that are not ready to ship in Sept. are noted in the catalog and delivery date is given.

GENERAL CULTURE DIRECTIONS

The best bulb soil is a rich sandy loam. Only a few, like Bearded Iris, prefer heavy soil. But nearly all bulbs do well in heavy soil, especially if plenty of humus is added.

All soils require the addition of large amounts of humus. You should compost all weeds, leaves and small branches. If possible, add manure to this and when well rotted and fine turn under and thoroly mix with the soil.

Fertilizers. Animal manures are the best. Use them with compost as explained. Do not use fresh manure except as a light mulch for certain growing plants and experiment on a few first as too much quickly destroys a plant. Do not add fresh manure or commercial fertilizer to soil just before planting bulbs or seeds. It would be as logical to give a day-old baby a tough steak, a piece of apple pie and two cups of coffee. Fertilize only healthy, thrifty plants. What would you think of a doctor who ordered a big meal for a sick man as a means of recovery? Do not fertilize when the ground is dry and plants need water.

After Blooming, many persons neglect their bulbs. A *Gladiolus* must grow and fatten at least two months after flowering. *Amaryllis* should grow with luxuriant foliage until late November or longer if it does not begin to yellow.

Let us consider the annual growth cycle of a bulb.

A dormant bulb contains a flower bud and short new leaves. There is food stored in the form of starches, etc., and also enzymes for digesting this food. While dormant, the stored up starches are turned into soluble sugar. Roots, buds and foliage begin to develop in their natural order and your care is rewarded. When thru flowering, the bulb has become smaller and is soft instead of firm and plump. This is a critical time. The bulb may appear at a pause for a short time but when a good root system has developed it will begin active growth. Encourage that. Give them food and water. Enough, not too much. The longer you can keep it growing, the larger and better will be your resulting bulb for next year. The yellowing of foliage will signify the bulb has reached full development. If you do not feed and water your plants, pets, domestic animals and children when they are awake and hungry, they do not thrive. If you know how to make a husband happy (or a wife) you should know how to make a plant "happy." Don't "love 'em and leave 'em," and over-coddling is often as bad as neglect.

Depth and Spacing often cause too much concern. Bulbs usually have sufficient adaptability to do well under widely varying conditions. In a general way, bulbs should be about two or three times their diameter apart. Small bulbs like *Ranunculus* No. 3 may be covered 1"; bulbs the size of a Daffodil covered 4" to 6". Bulbs with a heavy top need deeper planting to maintain an erect position. Planting in light sandy soils should be deeper than in heavy soils. In very cold climates, deep planting protects bulbs from damage from frost. Few bulbs are too finicky about their depth and many of them have the ability to correctly adjust themselves to the most favorable depth if left in one place a few years.

Alibis. Many amateur growers refuse to accept responsibility for their failures when they result. They blame the bulbs, but not themselves, the weather, their soil or pests. Therefore they do not learn from the best teacher, experience. Luther Burbank said, "A failure is an accomplishment." It is, if you learned by it.

ACID AND ALKALINE SOILS

Most plants thrive in neutral, mildly acid or mildly alkaline soils and some will thrive only in distinctly acid soils. In the latter class are included *Rhododendrons*, *Callas* and most shade loving plants.

The acid-alkali balance is expressed in pH units. pH 7 is neutral. Below that the acidity increases, above it the alkalinity increases.

Soiltex Outfit. This little testing kit will enable you to determine the pH of your

soil. No chemical knowledge is required. Directions for use are included with lists of plants and their preferred pH. Price \$1.00 postpaid.

If soils are too alkaline or if plants to be grown in them require more acidity the best remedy is to incorporate much humus. Also improve the drainage, as lack of good drainage increases alkalinity. Peat is most acid usually, though some American peat has become alkaline. Oak leaf mould is more acid than other leaf moulds. Use much leaf mould or peat (preferably imported) for Gladiolus, Callas, Arums, Lilies, Haemanthus, Nerines, Orchids and all plants that require acid soil. It is best to buy peat locally on account of the high cost of transportation. But be sure it is imported Canadian peat with acid reaction. It should be pH 2.5 to 4. Test the peat offered you with Soiltex and don't buy poultry peat.

Canadian Peat. The most acid now obtainable. We can furnish this to local or near by customers who call for it at \$5.50 per bale. 10 lbs. for \$1.00. Or we will ship by express, f.o.b. for that price. Ask your express agent the cost before ordering as these bales weighed when we received them over 100 lbs.

Rootone. We know of really remarkable results from the use of Rootone, a plant hormone powder that induces quicker rooting of cuttings and bulbs and sprouting of seed. As a result of its action, bulbs make a more vigorous root system quickly and thus the flowers are earlier and larger; the foliage stronger and when dormant the bulbs will be found to be larger and with greater increase in number. We suggest you touch the base of a bulb to the powder until covered by a thin film. Or you can apply it with a soft brush or from a salt shaker after bulbs are set. Dip the end of cuttings into the powder. Tumble the seeds in a jar or in the seed envelope with the powder. When the seeds are coated, roll them out and save remaining powder. Treat your victory garden seed. Rootone will treat from 60 to 300 times its weight of seed and thousands of times its weight of bulbs.

We especially advise its use with spring planted Amaryllis bulbs as at this time the roots are likely to be absent or mostly dried up.

Price. One-half ounce is a good supply. Mailed, postpaid for 50c. Use directions above. We can supply in 1 lb. cans (for extensive plantings) at \$5.00, postage 15c extra.

Vitamin B-1 is a useful stimulant for plants, we believe. We have soaked the roots of Amaryllis in flower in the solution, when transplanting and the flower was uninjured, lasted for days and seeds were ripened. We have used it successfully with other plants in transplanting. Price, **Bottle** of 100 tablets, 75c.

Directions for use, applying only to our own tablets. In transplanting bulbs or any plants, loose roots, dissolve 5 tablets in 1 gal. water. Soak roots in this 15 to 30 min. Pour solution around plant when set.

To stimulate growing plants, for the first application dissolve 1 tab. in 2 gal. water. For succeeding waterings, use 1 tab. to 4 gal. of water once a week.

Warning. Do not soak dormant bulbs in vit. B-1. It rots them.

Information Please. I am always seeking for more and recommend that you do the same. That is why I belong to The American **Amaryllis Society**, (see under Amaryllidaceae) and The **American Horticultural Society**. The latter society publishes the **American Horticultural Magazine**, four large copies on heavy book paper, per year, which members receive. The topics covered are the entire field, not merely bulbs. The annual dues are \$3.00 per year which you may send to me if you wish.

You should join a local Garden Club, and subscribe for **Flower Grower**, Albany, N. Y. Send direct to them, \$2.00 per year.

Bailey's Cyclopedia of Horticulture. This 3-vol. set of over 3,600 large pages describes almost every cultivated plant. A wealth of culture information is also included. For \$20.00 we will send the complete set, postpaid. Sales tax in Calif. 50c.

Hortus Second (Bailey). A Concise Dictionary of Gardening and General Horticulture. This large 778 page volume lists nearly all plants offered in catalogs. There are fewer culture hints than in the Cyclopedia but we use and recommend both. Price, \$5.00, postpaid. Sales Tax 13c to Calif. customers.

BULBS AS POT PLANTS

Bulbs are the most desirable of pot plants and may be easily forced in the living room, kitchen, or small greenhouse. Their response is much more rapid than that of a recently potted non-bulbous plant because of their storehouse of food and energy in the bulb. The reward is often an outstanding flower in a few weeks.

The proper time to pot will usually be given under the listing. It is very important to pot at once the following: *Brunsvigia*, *Haemanthus coccineus*, *Amaryllis advena*, *Lycoris radiata*, *Sternbergia* or others that bloom very early in fall. Pot soon the *Arum Palaestinum*, *Veltheimia*, *Lachenalia*, *Cyrtanthus*, *Nerines* and *Oxalis*. White Callas, *Freesias*, Baby Glads, *Sparaxis*, *Tritonias*, *Babians*, and those that flower from mid-winter on, may be planted from Oct. 1 to Dec. 15. Colored Callas may be potted as early as Dec. 15 if watered only lightly until well started. They start easiest about Feb. 15 and are less likely to rot from too much water before growth starts. *Amaryllis* hybrids and most *Amaryllis* species can be potted from Dec. 1 to Apr. 1 but the early date is preferable.

The *Ismene*, *Elisena*, *Agapanthus mooreanus minor*, *A. pendulus*, are sent as soon as dormant as all are deciduous. They do not usually start before about Feb. and should be watered very little until growth starts. Don't water *Ismene* and *Elisena* before Feb. 1 and keep these two in a very warm room, as this will make them start more easily and more sure to flower early. 70° to 80° is not too warm. *Amaryllis*, *Agapanthus*, *Ismene* and *Elisena* like a warm room when growing but most of the others need a cool room.

Clivias are among the most gorgeous of pot plants. I would place only *Amaryllis* and Orchids as more desirable. They need a cool room and not too much water in winter. *Cymbidiums* Orchids are gorgeous pot plants. They should be potted in $\frac{3}{4}$ peat and $\frac{1}{4}$ sandy loam or nearly pure sand. Half and half will do. Leaf mould may be used instead of peat. Light watering but frequent, they must not become dry nor soggy.

Billbergias make nice pot plants with attractive foliage. Water sparingly in winter unless flowering. *B. nutans* has a lovely flower in Feb.

The following can be moved or potted at any time: *Amarcrinum Howardii*, *Sprekelia formosissima superba*, *Tulbaghia violaceae*, *Clivia*, *Cymbidium*.

Haemanthus Katherinae, one of nature's masterpieces, is a gorgeous pot plant. This bulb is almost evergreen and has only a very short appropriate season for moving and repotting, usually late Jan. to Feb. but not always same date. Use regular potting soil with peat added and a 12" to 15" pot. (This bulb will be listed in Spring Catalog.)

I have mentioned only the most outstanding bulbs for potting here. Dutch Iris, *Allium neapolitanum* and *triquetrum*, *Brodiaea uniflora* and many other bulbs listed in this catalog are also desirable for potting. For that matter one can grow about anything in a pot of appropriate size but I would not recommend a *Sequoia gigantea*.

Potting Directions

The pot for a 2½" *Amaryllis* bulb should be about 7" diam. This is about right for most bulbs of that size. Give larger or smaller bulbs, pots proportionate in size. Small bulbs like *Freesias*, *Babianas*, *Tritonias*, *Sparaxis*, etc., if about ½" diam. may be planted 2" apart in pots up to 6" diam. Large sizes of these that are near 1" diam. ought to be 3" apart.

It is most important that drainage be perfect and the soil of a friable texture that allows water to drain perfectly. Cover the hole in the bottom of pot with reversed bits of broken pots and on top of that small pebbles then coarse sand will help. An imperfectly drained soil often causes bulbs to rot before starting and if they start they do not grow and flower well. Yellow tipped leaves often indicate poor drainage. The pots should be clean and scalded.

The proper soil is a rich sandy loam with the addition of thoroly rotted leaf mould. Add peat or oak-leaf mould for acid loving plants. Use no fresh manure or other

fertilizer at planting. Be very discreet even in using very old rotted manure. Rotted dairy manure is rather safe. A heaping tablespoonful of bone meal is good. Thoroly mix all ingredients.

Most small bulbs should be planted just under soil surface.

An Amaryllis and most large bulbs may have $\frac{2}{3}$ of bulb above surface. When placed, the soil may be settled by a thoro watering, once. After that no more water is usually needed until after growth begins, altho the soil should not become quite dry at base of bulb. A wet condition very long often rots a dormant bulb before they start, or later. The soil surface may appear dry and yet be too wet for starting bulbs at center of pot.

Most bulbs should have a cool room, about 60° while rooting. When a bud or foliage gives evidence that growth has started, bring the pot to living room temperature of about 70° and water slightly. It is not time to water them freely yet. Do that only when flowering or in full growth. Do not overwater at any time. Sufficient time between waterings must be given to allow water to drain away, evaporate or be absorbed by roots so that air penetrates and bathes the entire root system. This is very necessary to plants and the roots need not be actually dry to permit it. They must not be water logged nor should they become dry. When in full growth and bloom feed the bulbs about every 2 or 3 weeks with very weak liquid manure. It should be only amber tinted, the color of weak tea. Do not give liquid manure to a plant that is in nearly dry soil. Proper feeding will result in luxuriant growth. Too much yellows the leaves, because the root hairs are burned off.

It is very important to continue watering and feeding after bulbs are thru flowering. At that time they are rebuilding lost tissues, increasing in size, making offsets and finally constructing new buds for next season. At this time they will also store up food to support the early growth the next year. This is where most amateurs fail in getting results the following year. Some even write and ask me if they should cut off the foliage and dry up the bulbs at once, after flowering. Plants are living beings. They feed, drink, breathe, grow, react to light and heat and die the same as you if not permitted to follow nature's way. If they do not succeed, however, very many blame the bulbs. You will succeed with intelligent care. Blame yourself or the conditions of growth when you have an occasional failure and you will thus learn. There is an element of chance in growing anything, but it is reducible. That makes it interesting. Match your skill against all unfavorable possibilities and learn to overcome them. That is your life problem also. There is a cause for everything. Find it.

ARRANGEMENT OF THIS CATALOG

... is by Plant Families, not alphabetically. We also try to group more closely related plants together. Customers approve this plan because of increased information made possible.

In the following lists, the **genus** (plu. **genera**) is mentioned first. After it, the **species** (plu. also **species**) or horticultural variety is named. Thus we list *Amaryllis ambigua* or *Amaryllis* "Sibyl Houdyshel," tho it is more botanically correct to say *A. hybrida*, var. *Sibyl Houdyshel*. For the sake of brevity we shorten this. Please note the initial of the genus is used for the second and succeeding species. Thus, the initial *A.* may mean *Amaryllis*, *Alstromeria* or *Agapanthus* according to the species listed just preceding.

THE AMARYLLIS FAMILY—*Amaryllidaceae*

This family includes the bulbs from *Agapanthus* and thru *The Alliae*.

The American Amaryllis Society is an association of those thruout the world who grow Amaryllids as an interesting and intellectual hobby. An annual book "*Herbertia*" of about 250 pages is sent to each member. Therein is discussed the best culture methods; descriptions of new species; notes on *Amaryllis* in their habitat; reports on experiments in crossing, culture, propagation, etc. *Herbertia* is the essential reference book on Amaryllids. Beautifully illustrated.

I invite you to become a member by sending me \$2.50 for your annual dues. This will entitle you to a copy of vol. 11 *Herbertia*. This vol. 11 is the 1944 year book of the society. It was scheduled to be distributed to members in Jan. and thus is about 7 months late. This is due to the printer's loss of employees to the army. We believe and hope that the work can be completed in a few weeks but an exact date cannot be set. You may wish to purchase former copies which may be delivered with reasonable promptness. Vol's. 1 to 5 inclusive are no longer available. Vol's. 6 to 10 may be had for \$3.25 ea. but the supply of some will soon be exhausted. If you are anxious to get a complete set, I will try to get vol's. 1-5. But inquire only if very much interested, not simply to satisfy a casual curiosity.

Send us your check for membership and for the *Herbertia* issues desired.

Our *Herbertia* Editor, Dr. Hamilton P. Traub of the U. S. Dept. of Agriculture, is no doubt, the greatest living authority on all *Amaryllids*. The Society is fortunate to have his devoted and gratuitous services.

CLASSIFICATION OF AMARYLLIDACEAE

Since the time of Carl Linnaeus, the father of modern Botany, who first arranged plants according to their relationships, many additions to our knowledge have required revision of his classification. Thus the *Amaryllidaceae* has been thoroly revised, first by Herbert in 1836 and about 50 years later by Baker. But since Baker's work appeared, many botanists have studied *Amaryllids*. Much exploration has been done in their various habitats. New species have been found and described. The information is tied up in countless monographs and separata. It needs to be assembled into a new *Amaryllidaceae*.

Dr. H. P. Traub, Editor of *Herbertia*, has undertaken the task and we hope that his book, "*Amaryllidaceae*," may be completed and offered for sale in this catalog in a few years.

For years, we have been preparing you for the changes in nomenclature which will be used in Traub's *Amaryllidaceae*. This catalog will arrange *Amaryllids* under these new generic names. Thus *Hippeastrums* will be found under the correct former name of the genus *Amaryllis*. The former *Amaryllis belladonna*,—which evidently never belonged in the genus *Amaryllis*, will be listed under the name *Brunsvigia rosea*. *Habranthus*, formerly considered a subgenus of *Hippeastrums*, is not moved to the genus *Amaryllis* but is given generic standing, the genus *Habranthus*.

LIST OF AMARYLLIDS

Agapanthus. The name means Love Flower. Blooms in late spring and summer. Large, most attractive flower umbels on tall, erect stems. Universal favorites in south and easily grown in north in tubs or buckets, wintered in basement. Full sun. Delivery any time, except *Mooreanus minor* and *pendulus*, which are delivered fall to spring.

Agapanthus africanus var. mooreanus minor. Lovely blue umbels on 18" stems. The smallest *Agapanthus*. Deciduous. **Special culture.** It needs good garden loam, half shade and should not dry out. Even in winter, when dormant, see that soil is slightly moist. Being so very small it is especially useful for pot culture and 4 plants will need only a 6" to 8" pot. Winter the pots in a basement. Do not try to force them too early. They may be shifted to the garden in spring. Only in the south can they be left in ground over winter. Fine plants this year. Price 50c ea. or 4 plants for an 8" pot, \$1.75.

A. longispathus. New species. Flowers resemble *Orientalis* but blooms more profusely and are more graceful. Rapid multiplier. 75c ea., 3 for \$2.00.

A. orientalis (umbellatus). Blue Lily of the Nile. Our variety is an especially fine one with deep blue flowers on a tall stem. Many flowers are produced in spring and thru summer. 50c ea. Extra large roots, 75c.

A. orientalis, "Sky Blue." Lovely light blue. \$1.00.

A. orientalis, var. albidus. Has pure white flowers. \$1.50 ea.

A. pendulus. Entirely new and distinctly different species of greatest value. Flowers in shades of blue and purple in a great variety. Flowers long, tubular and pendulous when open. The umbel is smaller but most graceful. Like "mooreanus minor" it is deciduous and must be ordered before April 1. In the north it can be grown in a 10" or 12" pot or dug and stored. \$2.00 ea.

Alstroemeria. Alstroemerias are very showy plants with long slender stems. As a cut flower they last a long time, are very beautiful and are distinctly different from the more common flowers. The individual flowers are beautifully colored in rich pastel tones and resemble orchids. They are exquisite as cut flowers. The many flowered umbels are on a tall slender stem which are stiff but need the support of close planting.

Culture. Where summer sun is hot they need slight shade but do not do well in heavy shade. The soil should be a rich sandy loam with good drainage and a great deal of humus. This may be had from old rotted screened manure or leaf mould. If your soil is heavy you can only grow them by adding a large quantity of sand and leaf mould. Plant the cluster of tubers in the south from Sept. to Nov., with the crown 2" under the soil surface. When tops die after flowering withhold water. It is better not to disturb them. In the south they start to grow in the fall and will require irrigation before rains come.

They must have an abundance of water at all times when growing and a good drainage. They are hardy as far north as Washington, D. C., and we have them reported hardy in a well protected situation, with winter mulch in New Jersey and Ohio. They may also be grown in large pots. Please order early in fall, as we cannot hold them back in this warm climate.

We are offering this fall, only the most beautiful and outstanding species.

Alstroemeria chilensis. Extremely attractive flowers in a wide range of color from nearly white to various pink, red, yellow and orange tones. One of the best and easiest to grow. 25c. \$2.50 doz.

A. ligtu Stinsoni. The flowers are similar to Chilensis but larger. The sturdy stem is 3 ft. tall. 35c ea. \$3.50 doz.

A. Assorted varieties. Contains the above and others. 20c ea. \$2.00 doz.

Amarcrinum Howardii. A cross between Brunsvigia rosea (Amaryllis belladonna) and Crinum moorei. Flowers are a pure pink and very attractive. As it is a winter bloomer and profuse it is a valuable bulb for a large pot. It may not flower soon after moving but give best culture and wait if necessary. \$1.50 ea. Large bulbs, \$2.50.

Amaryllis. Under this genus we are listing species and hybrids formerly listed under Hippeastrums. Amaryllis is the old-time and popular name. They are probably the most popular of all bulbs for growing in pots and equally valuable for southern gardens. They are hardy thruout the south along the Atlantic coast to N. Carolina and even up into Oklahoma they can be grown outdoors in well drained soil, planted about 4" deep and mulched with straw, leaves or brush over winter. But for that we would recommend that you plant only **A. Johnsonii** or the cheaper and usually more vigorous hybrids. The vigorous Rutila Hybrids are especially advised.

How to Grow Amaryllis In Pots. When bulbs are received, pot at once. Have pots and soil ready to receive them. Do not remove or injure any living roots that are attached. Moisten these roots and dip or sprinkle with Rootone. If there are no living roots, moisten base of bulb after cleaning and apply Rootone. Rootone is not essential but it helps the development of new roots.

A bulb under 3" diam. needs a 6" or 7" pot. Larger bulbs should have a 7" to 8" pot in proportion to the size.

The best potting soil is a friable loam. To this add an equal volume of a mixture composed of equal parts of sand, well rotted cow manure and rotted leaf mould. Use no peat. Bone meal is recommended, 1 tablespoonful to each pot. Mix all thoroly.

Pot the bulb with neck and upper bulb surface exposed. Water well but after that keep the soil only slightly moist until growth starts, then gradually increase. When first potted set the bulbs in a cool, light room. The best temperature now is 45° or 50°.

Later the pots may be removed to a room of about 60° or 70°. 80° will force more rapid growth and earlier flowers and this is all right when the bulb is well rooted. Buds will usually have shown.

After flowering, the bulbs will be shrunken and perhaps soft. A period of growth is necessary to fill them out and increase their size. If good growth is made at this important stage the bulb will be much larger than in the preceding year and offsets may be made. It is necessary to keep them growing as long as possible. When the weather is warm outside the pots may be plunged in the garden or the bulbs with entire, unbroken clumps of roots and earth may be removed from pot and reset. This method, if carefully done and the bulbs are given abundant moisture and some fertilizer thruout the summer, is the best. Bulbs may be planted in full sun, but slight shade is good where very hot summers prevail. When bulbs are well established give liberal mulchings of dairy manure. Use stable manure carefully. It is good but very strong. If it does not rain every week give a good irrigation. Before heavy frost, remove to house. Allow them a rest of several weeks but do not allow pots to dry out completely. The temperature of 45° checks growth. When you want them to start, bring to 60° and water a little. You can become expert in obtaining flowers every year. In the garden plant *Amaryllis* just under the soil surface.

I am frequently asked why the inquirer's bulbs do not flower. Perhaps they have flowered the first year after their purchase but not thereafter. Some state their bulbs become smaller each year. These results inevitably follow poor culture. If you give them correct culture, plenty of water and liquid manure when growing well after flowering and keep the growth luxuriant for about 6 mo. or more (as long as they will grow) you will have nice fat bulbs, with a bud or buds formed within for the following season.

When leaves naturally begin to yellow it is a signal that they would like to rest awhile. Some bulbs will continue to have green foliage but one should reduce water to give an early winter rest. Well established bulbs can often be brought into flower in January or even by Christmas. But they should have had a few weeks dormancy preceding that.

How to judge the quality of the flowers of *Amaryllis* hybrids. The perfect flower of the Leopoldi type should be at least 5" to 8" across. The petals should be well rounded and broad, overlapping each other, no twisting of petals and forming a wide open flat flower. The texture should be smooth and firm of good substance. The tube should be short. There should be little or no green in throat but as the species Leopoldi contains considerable green there are few hybrids that do not contain some green.

There should be no dull colors, like brick red. But colors should be bright and of every imaginable tone within the range of this genus.

Self colors are desirable to go along with stripes and other variations. But it is difficult to get other than red selfs and these are unusual. A few of our Select Strains are pure red, scarlet, rose or pink selfs. But they are few and not separately labelled. Don't order self colors or any colors except as listed. When you are lucky enough to draw a self color you may congratulate yourself that you received a bargain worth 3 to 10 times its cost.

Pure Whites are very rare. They are very expensive and are difficult to grow. Be satisfied to have White Backgrounds, Near White or Sibyl Houdyshel.

Perfection has seldom been reached, if at all, by *Amaryllis* hybridizers. We do not want our customers to assume that our description of the ideal *Amaryllis* flower is a description of those we list. Among our **Select Strains** hybrids, all are good; a few approach perfection. Most of the bulbs produce flowers between these extremes.

***Amaryllis* Species and Hybrids**

***Amaryllis advena*. Oxblood Lily.** This species blooms in the fall, Aug. to Oct. There are 5 to 7 or more flowers in an umbel on a 10" slender scape preceding the

foliage. There are two color types, dark oxblood red and pink with a lavender tone. We sold nearly all our large bulbs last year and have very few this year that are large enough to sell. The light form is especially scarce at present.

Culture. *Amaryllis advena* is reported to be hardy by a commercial grower in the warmer parts of Mich. and very likely would prove hardy in milder climates where peaches can be grown. However, we will recommend it only for trial from Philadelphia thru southern Ohio, Indiana, Illinois, Missouri, Kansas and south. Plant 6" or 8" deep. They may be flowered in pots the first year but it has not yet been proved adaptable to continuous pot culture. Order **before** Sept. 15.

Amaryllis advena. Ox-blood Red, 60c ea.; Pink, \$1.00 ea.

A. ambigua. This is now believed to be a wild hybrid rather than a species. It is a beautiful amaryllis, with a scape 30" tall. Five to nine flowers in an umbel, lily-like in form, pure white with lines of pink. Very spicy fragrance. Large bulbs, \$3.75.

A. hybrids. Select Strains. These are the Leopoldi type, selected from the very best American strains.

Most *Amaryllis* that are sold are chance seedlings. In Florida and California there are many who grow acres of bulbs. The seed is collected in the field and no selection of parents is possible. The strongest growers, not the most beautiful, produce the most seed.

Judged from the standpoint of a turnip, these seedlings are likely to produce the most beautiful, vigorous and largest bulbs. From the vegetative functions of prolific seed bearing, rapid, vigorous growth and increase they can be sold the cheapest. Dime stores often sell them. Many very well known and honorable firms handle this grade of *Amaryllis*. They please many customers. The "beautiful bulbs" will range in price from 35c to 75c each.

Altho these bulbs will produce flowers that please the average inexperienced amateur they are not truly representative of the advancement made in the quality of *Amaryllis* flowers. To appreciate fully the quality of any flower, one needs experience, study and the best examples for comparison.

Our **Select Strains**, in contrast with the average amaryllis, are seedlings of selected parents. The parents are not judged as vegetables (nature's process in a large measure) but for the beauty and perfection of their flowers. These parent bulbs are of a quality that would command a price of from \$5.00 to \$25.00 or more per bulb. The parents are grown in greenhouses which exclude insects and the possibility of nature's way of crossing. They are all hand pollinated and study is given to the proper mating of the parents.

The **Color classes** are founded upon the color of the seed parent. Not all come true to this color and these are rogued out at the first blooming. But often a few rogues, or off-colors will be found. It is best to buy 3 or more of a color in order to get the nearest to your ideal. But every bulb will give a good flower and be worth the price paid. A reasonable percentage of the bulbs will give very superior flowers and these bulbs may be worth from double to several times their cost.

Personally, I have grown *Amaryllis* continuously since 1898, first as a hobby and later as a business. I have imported bulbs and seeds from the best specialists in England and Holland and made selections from Burbank's originations after a very close study of them all. I am a little hard to please in *Amaryllis*, but I consider our **Select Strains** worthy of their name.

Due to lack of sufficient labor, we and other growers have found it most difficult to "rogue" our *Amaryllis* and other bulbs. As a result, quite a few bulbs of the highest quality may remain in the different classes. Growers usually remove these to use for hybridizing and seed production. For the same reason there may be more "off colors" than usual.

Sizes. Unless otherwise specified our *Amaryllis* bulbs are 2½" to 3" diam.

Select Strains. Assorted Colors. 2½ - 3" bulbs 80c ea. 3 for \$2.25. 3 - 3½", \$2.50

ea. 3 for \$7.25. 3½" or over \$3.50 ea. **Note.** The 2½" bulbs usually produce one or two scapes. The larger sizes produce more scapes and larger flowers.

Select Strains. White Background. The ground color is white with markings of red, pink or rose. The markings are usually light and the effect is that of near white flowers. Pure whites are developed by selection of seedlings of these. 80c, 3 for \$2.25. 3" - 3½", \$2.50 ea.

Select Strains. Near White. These are nearer to white than the White Backgrounds. There are light markings of rose and pink and a few are very close to pure white. 2½" - 3", \$2.50 ea. Stock limited. Order early.

Select Strains. Crimson. 90c. 3 for \$2.65.

Select Strains. Scarlet, lighter red. 85c ea. 3 for \$2.50.

Select Strains. Salmon. These vary from light to dark, intense salmon. 85c ea. 3 for \$2.50.



Select Strains. Rose. A good many of these are true American Beauty Rose pink. Others are in different shades of rose. \$2.50 ea. About 3" up, \$3.50 ea.

A. American Hybrids, Assorted colors. These are from a variety of sources. Blooming sizes, 50c ea. Large bulbs, 3" or more, 75c ea.

A. Rutila Hybrids. This California strain I have so named because by the shape of the bulb, the formation of stolons and by other characters I believe it was developed from the species Rutila. The history of the strain is unknown to me. These hybrids are nearly all of one color,—red with a white throat and green tinted keel.

This is as vigorous as any strain I have seen and seems ideal for landscape use. The flowers are not of the Leopoldi type and are not of exhibition quality. But for a bright splash of color in the garden they are excellent and the equal height of the scapes with flowers nearly all the same color adds to their landscape value. They

A. SELECT STRAINS

multiply rapidly and soon form large clumps. The bulbs grow to an immense size, sometimes 4" in diameter or over.

Being so hardy and vigorous I suggest they would be a good type to plant outside on the border line of Amaryllis hardiness as in Okla., Ark., N. Carolina, etc. But plant there as we advise in the culture directions for those locations, covered 4" and mulched in winter.

Bulbs 2½" to 3" 50c ea. 3" to 4" diam. 75c ea.

A. Diener's Posthumous Hybrids. These are Diener's latest, grown from his own seed and planted by him. Claims were made for gigantic flowers but we find them little larger than Select Strains and not as desirable. They are Equestre type and as many umbels will have from 5 to 8 flowers (from large bulbs) it may be that by disbudding, leaving only about two to develop, they might attain the 12" to 16" diameter claimed. Assorted colors only. Large bulbs, \$2.50.

A. Johnsonii. The first Amaryllis hybrid, now distributed all over the world. Dark red with contrasting broad white band thru center of petals. One of the hardiest, easiest to grow and most rapid in increase. 50c ea.

A. Sibyl Houdyshel. (Burbank origination.) White with narrow pink line on border and flushed deep pink in throat and lower petal. Very fragrant, sturdy grower, rapid multiplier. Jumbo bulbs, \$6.00 ea. No small bulbs sold.

Amaryllis Seed. We are unable to produce enough seed for our own planting. It is far better anyway for you to grow your own seed as that which you buy is often too old. Amaryllis seed should be planted shortly after ripening and drying. One year old seed is unlikely to grow in a good percentage.

Plant Breeding is an interesting science and art. Undertaken as a hobby, it has often resulted in fame. It will involve and develop great skill, ideals of beauty, good taste and intelligence. I suggest you start with our Select Strains. Get a dozen or more bulbs and use the pollen only from those you like the best. Cross pollination is easily accomplished by placing the powdery pollen borne by the six stamens on the stigma in the center. The stigma when ready for pollen will usually be opened into three parts. When the seed pod is ripe it bursts open and may be removed and dried. Plant the seed (soon) in a fine sandy loam containing plenty of humus. Do not use peat. Cover seed about $\frac{1}{2}$ ". Seedlings may be grown in pots in house or greenhouse where they will continue to grow all year without a dormant interval until they flower; usually this requires 2 to 3 years. In the warm south they can be grown outside under the half shade of lath. But frost usually destroys foliage in winter and cool nights interrupt growth.

Brunsvigia rosea. Synonyms, **Amaryllis belladonna**, **Callicore rosea**. This bulb is familiar in Calif. and many parts of the south as Amaryllis belladonna, Naked Lady Lily, etc. I hope you can adjust yourself to this new name the botanists have decided on. There is sufficient evidence that the bulb is really a Brunsvigia and certainly it is incorrect to call it Amaryllis.

These begin to flower often in late July. The variety **Major** is in full flower in Aug. **Minor** follows soon after. The umbels are many flowered and the flowers are of the most exquisite pink and most entrancing fragrance. They are not suitable for pot growing as in pots they flower only the first year. But that flower is well worth the cost of the bulb.

It is hardy where winter temperatures go as low as 10° or 12° above zero. That limits its culture to the south, and along the coasts to N. Carolina and the state of Washington.

Order the var. "Major" before Sept. 5 if you wish to see the flower this year. Later bulbs are doubtful. The var. "Minor" will likely bloom this fall if ordered before Oct. 1.

Brunsvigia rosea, major. Pure pink, 40c ea. L. 50c ea. Jumbo 80c.

B. rosea, minor. Later to flower. Pink with lighter throat. 65c.

B. rosea, var. "Ethel." This, our seedling, is probably not different from some already named variety. This name will be abandoned when we find the correct one. Dark coral rose with white throat. Late blooming. One of most beautiful. \$2.00.

Clivias. Altho easy to grow and to flower by the amateur, they will always be classed with the aristocrats of flowering bulbs, because the flowers easily place them



A. SIBYL HOUDYSHEL

there. They increase so slowly by division that the chief method must be thru the freely produced seeds. But Clivias require at least five years and usually seven, to flower from seeds. This time involves expense. They can never become very cheap.

Clivias have evergreen, strap-like foliage somewhat resembling that of Amaryllis.

The flowers are produced in umbels of 10 to 25, in rich and exquisite tones of orange, in March and April. When not in flower the deep rich green foliage and later the red fruits are most ornamental.

Culture. They are usually grown in pots, even in the south, as more perfect foliage is thus possible, and when in flower one wants them in the house. We grow them in a lath house, lath spaced $\frac{1}{2}$ " apart and in garden under Avocado (evergreen) trees. They must have shade with only a few flecks of sunshine, but plenty of light and air.

Clivias must never be dried off or allowed to lose their foliage. Keep them well supplied with water after flowering, all summer and fall. Liquid fertilizer occasionally helps. When growth ceases in late fall rest them by giving them less water. But keep moist enough to prevent wilting of foliage. At this time they should have a cool room with temperatures from above 32° to not much over 40°. Pots should be 8" for a small plant up to 12" for larger. Drainage must be perfect. Potting soil is described under "General Culture Directions." pH 7 is about right.



**CLIVIA, RECENTLY RECEIVED,
BUDDED PLANT**

Please note. One cannot guarantee a Clivia to flower the first year after moving tho they usually do. The only sure way to have one that will flower in 1946 is to add 75c to the price of the plant ordered and ask us to send the plant when budded next March. The extra cost of labor to pack, packing material and postage for a budded plant is now about that much. Do not order budded plants of the \$1.00 size "miniata" or the \$2.75 size of "miniata hybrids."

The foliage of our Clivias, grown outside in the ground, will not be as perfect as that of pot grown plants. But when potted, they replace the old foliage in a few months and become specimen plants.

Clivia miniata. Wide open flowers of soft yellow orange. Flower earliest, late Dec. to Mar. 1. Hardest and easiest to grow. Blooming size, \$1.00. Large, \$2.00. The latter is more sure to flower the first year.

C. miniata hybrids. Similar to the species "miniata" in foliage, hardiness, wide open flowers, etc., but there is some variation in color and form of flower. Most of them are in light orange tones. A few are dark and a few have a white throat. Do not express

your color preference for any Clivia hybrids as we cannot tell the color from the plant. **Special Prices:** Small plants that should bloom in one or two years, \$1.50. Small blooming size, \$2.75. Med., \$3.25. Large, \$4.00.

Cooperia pedunculata. Texas Rain Lily. So called because they flower after a rain or if you water them. Two bulbs are called Rain Lilies in Texas. This one and

Habranthus andersonianus texanus, which see. *Cooperia* are almost hardy and as they can be planted 6" deep they should be hardy where winter temperatures do not go below zero for more than a short time as in Okla. or southern Kansas. On the border line one can mulch the ground to protect them. They may also be dug and stored over winter like Glads. The best *Cooperia*. Pure white with some pink markings on back of petals. 40c ea.

***Elisena longipetala*.** Rare Peruvian amaryllid. Closely related to *Ismene*, which it resembles in bulb and plant, but the pure white, large flowers are far more graceful and beautiful. Culture like *Ismene*. Easily grown in the north. Plant in spring, dig and store in fall like *Gladiolus*. Plant 4" deep. Late fall delivery. Very rare. \$3.00 ea.

***Habranthus*.** This was formerly considered a sub genus of *Hippeastrum*, but upon changing the generic name from *Hippeastrum* back to the original *Amaryllis*, botanists have wisely given the *Habranthus* their proper generic standing. They usually have a one flowered umbel.

Culture is very much the same as for *Amaryllis*. Most of them are hardier and probably all could be grown in pots. Some are winter growers, others are summer growers, still others are evergreen.

***Habranthus andersonianus*.** Deep yellow flower, bronze on reverse, in the fall before foliage appears. Winter growing. Small bulb and plant, with flower about 1½" across on top of a 10" scape. About as hardy as *Brunsvigia rosea* and as far north as Okla. Delivery until Sept. 15. Later orders filled in spring. 50c ea.

***H. andersonianus*, var. *Texanus*. Texas Rain Lily.** A smaller plant, narrower foliage, but much like the type variety. Both varieties may be planted very close, in full sun. They are very free flowering and every time it rains or you water them, in the flowering season, a new crop of flowers appears, clothing the bed with a rich gold carpet. Both grow easily from self-sown seed. Delivery, same as above. 50c ea.

***H. brachyandrus*.** Long tubular flower like *H. robustus* but much larger and deeper, more richly colored shades to a deep purple in throat. Not winter hardy except in far south. Delivery any time but early spring is best. \$1.00. Largest, \$1.50.

***H. robustus*.** Properly named. A robust grower. Like *H. brachyandrus* but flowers are a lovely tone of lilac pink and it is more hardy, nearly evergreen, more profuse in growth. Seeds itself freely. 35c ea.

***Haemanthus*.** This south African genus of the *Amaryllis* family is rare in cultivation, therefore unusual. They are hardy only in almost frost free climates like So. Calif. and Florida, but are rare pot plants in the north. The soil must be well drained and should be composed of a mixture of loam, leaf mould and peat, with plenty of sand. The entire mixture should feel gritty. When in vigorous growth, the plants can use weak manure water or light, successive mulchings of manure. In our spring catalogs we list *H. Katherineae* and *H. multiflorus* which are equally rare and unusual and most gorgeous in beauty.

***Haemanthus coccineus*. Blood Lily.** This very rare bulb produces two opposite leaves, 3" wide, which lie on the ground. Winter grower. The bright red flowers are small but very numerous in an umbel 2" to 4" wide. These precede the foliage in early Sept. The 6" to 9" green stem is heavily spotted with red. A curious and unusual bulb. If ordered after Sept. 15, it may not flower this year. Give full sun or half shade. We can offer only 25 bulbs at \$3.00 ea.

***H. puniceus*.** Smaller, evergreen plant that makes a desirable pot plant of easy culture. Small umbel of scarlet flowers, on a mottled 12" stem, followed by red fruits. Flowers in spring as a pot plant. Delivery any time. \$2.75 ea.

***Hemerocallis*. Daylily.** The flowers range in color from dark bronzy red, thru pastel tones of pink to orange and yellow. They are borne on a branching scape well above the foliage.

The Greek name, meaning, "beautiful for a day," refers to an individual flower. But these are so freely produced, thru a long period that "beautiful every day" would be more apt, as a collection of several sorts show masses of flowers thruout the spring,

summer and fall and here we often have some winter flowers. The modern sobriquet of "The Perennial Supreme" is well deserved.

Culture. While their beauty is their greatest recommendation, their easy culture and hardiness adds to their desirability. They will succeed where any plant will succeed. I have known abandoned plants here, where we have arid, hot summers, to persist for years. But that must not be their fate. They grow well in full sun. Slight shade is better. If given constant moisture about their roots, preserving this and coolness of the earth with a good mulch, the plants are ideally situated and respond with generosity. They are hardy even in severe winters in the north. They are fibrous rooted, not bulbs, and must be planted at once when received. Altho they can be moved any time, it is better to ship from late fall to early spring, which we do.

In these war times, when it is difficult to get labor for maintenance of extensive gardens and landscaping, one solution is to plant Daylilies extensively. They are an almost perfect border or landscape plant, never have to be dug and replanted. All that you must do for them is, keep the weeds down and water. They will even choke out most of the weeds. A heavy leafy mulch helps every way.

In Daylilies, the sepals are colored and petal-like and are an essential part of the floral display.

Hemerocallis Araby. A lovely pastel color, with the effect of bronze on gold dust. 30". \$3.00 ea.

H. Bagdad. Coppery red over orange veins. Mid-zone of madder brown. Very striking large flowers. 3 ft. June, July. \$1.00.

H. Calypso. Large, fragrant lemon yellow flowers. Opens in evening. 42". June-Aug. 30c ea. \$3.00 per doz.

H. Chengtu. Brilliant coppery orange-red with carmine mid-zone. 3 ft. July to Sept. 1. \$1.50.

H. Cinnabar. Cinnamon sprinkled over orange. Strongly gold-glistening. 30". July-Aug. 60c.

H. Crown Prince. Color like Mikado. 30". June-Aug. 25c ea. Per doz. \$2.00.

H. Dauntless. Cadmium yellow. Fulvous red blended in mid-zone. Pastel effect. 30". June-Aug. \$1.25.

H. Florham. Still popular old hybrid. Large, golden yellow. May-July. 50c.

H. Florida. Pastel shades. Light chrome yellow with rose blush. Darker mid-zone. \$2.50.

H. Fragrance. A fine deep yellow. Fragrant. \$1.50.

H. Kwanso. The Double Orange Daylily. 20c ea. 3 for 50c.

H. Linda. Petals, ruffled golden yellow, flecked with cinnamon with rose-zone. Sepals, pure yellow. Very lovely. \$1.50.

H. Margaret Perry. Brilliant orange-scarlet. 4 ft. July-Aug. 35c.

H. Mikado. Orange with mahogany-red zone. A favorite. 3 ft. May-July. 50c.

H. Nubiana. Dark chocolate-red with yellow stripe in petals. One of the darkest varieties. 2 ft. \$4.00.

H. Patricia. Pale yellow. Large fragrant flowers. 30". July-Aug. \$2.00.

H. Radiant. Rich orange. 42". June-July. 50c.

H. Rajah. Deep English red with darker red veins. Garnet red eye-zone. 40". July-Aug. \$1.75.

H. Rosita. Near carmine-crimson with coppery red tone. 36". Part shade preferred. \$3.00.

H. Serenade. Rose-fulvous markings on apricot cream. Faintly overcast darker. 4 ft. June-July. \$2.00.

H. Sibyl. Dark purple-red petals, lighter sepals. \$3.50.

H. Soudan. Lemon yellow. Broad wavy petals and sepals. 3 ft. June-July. 50c.

H. Vesta. Deep orange with glistening gold sheen. 30". May-July. \$1.00.

H. Vulcan. Dark maroon-red. 30". July-Aug. \$2.25.

Hymenocallis. Spider Lilies. The true Spider Lilies are pure white with long

narrow petals and long stamens giving a fancied spidery appearance. The so called Red Spider Lily and Golden Spider Lily are *Lycoris*. **Culture.** They are hardy in the south and may be planted deep on the border-line as in N. Car., Okla., etc. They do exceptionally well in pots but are not winter bloomers.

Hymenocallis sp. Tropical Spider Lily. This appears to be the same as *H. rotata* and *H. tenuiflora* and these two appear to be one species. This is a large species, with pure snow-white flowers over 7" wide. 50c ea.

Ismene. We will list these in the Spring Catalog as spring is a better time to plant them.

Leucojum aestivum. Hardy in north. Blooms often before snow is gone. Dainty white flowers, each petal with a vivid green dot. Plant 4" to 6" deep. Do well in full sun, a little better in half shade. 10c ea. 90c doz.

L. sp. unknown. Larger and finer. 25c. Per doz. \$2.40.

Lycoris are natives of Japan and China. A few of them are now scarce because none can be imported. The following species is grown almost everywhere in the south.

Lycoris radiata. Red Spider Lily. Coral red flowers in a several flowered umbel in Sept. Flowers are followed by the foliage. Flowers have narrow undulate petals and long stamens which give the "spidery" appearance. This is a common flower in the south and one of our most beautiful. Hardy along coast to North Carolina and on Pacific Coast to Vancouver. In pots it flowers only the first year. 35c ea. Largest bulbs, 50c ea.

We are at present out of *Lycoris* in the following species: *Aurea*, *Squamigera*, *Purpurea*, *Incarnata* or any other except as listed. *Lycoris albiflora*, white, is probably unobtainable in the U. S. At the close of war we hope to have them all.

Narcissus and Daffodils

Both belong to the genus *Narcissus* of the *Amaryllidaceae*. Their popularity needs no promotion as no garden is considered complete without them.

Culture. All Daffodils except the *Polyanthus* *Narcissus* are hardy both in the mild climate of the south as well as in the colder northern states. In the north especially it is best to plant the bulbs rather deep where the frost does not reach. Six inches is about right. Smaller bulbs like *Jonquils* may go more shallow and be mulched. In California too and all the south there is an advantage in deep planting. We plant the *Trumpets* at least 4" deep. Plant September to November.

Sandy loam is the best soil, but any good rich garden soil will do. The addition of thoroly decayed manure is a help. Use no fresh manure. The addition of lime to the soil is good, and necessary if leaf mould is used in sandy soils.

In pots. *Narcissi* force easily. Pot the bulbs early for earlier flowers, Sept. to Oct. The soil should be $\frac{2}{3}$ sandy loam, $\frac{1}{3}$ leaf mould and perfectly decayed stable manure (use both or either one). Water the pots well. The *Polyanthus* varieties like *Paper White*, *Chinese Lily* and *Soi-liel d'Or*, may be then placed in a cool room and receive sufficient water to start growth. But the *Trumpet* Daffodils and all other hardy *Narcissus* need a more prolonged period under quite cool conditions to promote root growth. A good way is to plunge the pots in a cold frame or pit outside in the shade, after the first watering, and cover pots with 6" of sand, surrounding the sides well. Thus they will be cool and roots will develop. The sand will prevent evaporation.

As soon as they are well rooted they can be brought inside. Examine the pots first in about 6 weeks. The roots should penetrate the soil to the sides of the pot. By reversing pots held in both hands and tapping edge of pot one can with care lift the pot up to see if roots have reached the proper stage. (This takes about 4 hands.) There is no use to try to force the bulbs before abundant root development is reached. Only failure results.

The room temperature for forcing can be about 55° or 60° at night. Not much warmer during day. A little more warmth during day will hasten the flowers but

it may also cause them to blast if too warm. Better keep them cool until buds show. Then not over 70° in day time. Set pots in a sunny window.

Trumpet Daffodils

These are familiar to all, yet a few persist in calling them Jonquils, a name which can be correctly applied only to *Narcissus jonquilla*. Trumpet Daffodils do well in most climates except the tropics. They should not be planted in S. Florida.

By growing most of our own, we have been able to make some reductions in our Daffodil prices this year for equally large bulbs. When one compares prices of Daffodils, he must also compare size, quality and healthfulness. One grower lists a bulb at 15c. Another lists it for 25c. If the 15c bulb gives one flower and the 25c bulb gives two, the latter was more reasonably priced.

Try a few of the newer Daffodils, even tho one should depend on that old, fine and less expensive sort, King Alfred, for the large quantity of flower production. The magnificent large pure white flowers of Beersheba will thrill you. But don't force it. Plant very expensive ones in the garden to increase in size and number. Forced Daffodils must be planted in the garden the next year to recover.

Alasnam. Wide, short, densely frilled trumpet of pure deep yellow, a shade deeper than perianth. Very early. 25c ea. \$2.50 per doz.

Beersheba. A magnificent new white Daffodil. Very large flowers, nearly 5" across. \$1.75 ea.

Dawson City. A fine garden and exhibition variety. A broad flat perianth with beautiful flanged trumpet. Golden yellow self. 40c ea.

Diotima. Considered by experts the best of the super-giants. Flower 6" wide on 2 ft. stems. Beautifully proportioned. Perianth deep primrose yellow, trumpet deeper yellow. 60c ea.

Hector Treub. Uniform deep golden yellow. An improved King Alfred. Very early and easy in pots. 35c ea.

Hendrik Ibsen. A real "golden Daffodil." Pure self color and of most graceful conformation. Free flowering and very early. 35c ea.

King Alfred. Pure deep golden yellow. Beautifully frilled trumpet. The standard for florists' flowers and home gardens. You can and should plant them in quantity. Round bulbs 15c and 20c ea. Per doz., \$1.35 and \$1.60. Per 100, \$7.25 and \$8.75 f. o. b. (Express, not prepaid.)

Small bulbs. Some of these will flower the first year if planted early. Price 75c doz.

Lovenest. White perianth with cream trumpet that turns pink at the frilled edge. The lowest priced "pink daffodil." 50c ea.

Mrs. R. O. Backhouse. The best of the pink daffodils. White perianth with apricot pink trumpet, the edge shell pink, frilled. \$2.00 ea.

Leeds Daffodil, Crystal Queen. The Leeds Daffodils have a shorter and more flaring trumpet. The Crystal Queen is a large flower with pure white petals and the trumpet is a light primrose yellow which soon fades to white, giving the effect of a white flower. 15c ea. \$1.20 doz.

Polyanthus Narcissus. The flowers are in clusters. These are hardy only in mild climates, as far north as Ark., Okla. and N. Car. Large bulbs force easily in pots and flower about mid-winter but don't try to force those listed as small bulbs. The small to medium sizes should be planted only in the gardens in the south where some of them should flower the first year and become large for second year's flowering.

Chinese Lily. Good sized bulbs that should bloom in pots. White perianth with yellow cup. Very fragrant. 10c ea. \$1.00 doz.

Paper White. Pure white. Earliest to bloom. This lot of bulbs contains rogues that are also white with a light creamy cup. Small to medium bulbs, 8c ea. 60c doz.

Soliel d'Or. Pure deep golden yellow. Flowers in Jan. Like all Polyanthus Narcissus it is very fragrant. Small to med. bulbs, 10c ea. 75c doz.

Jonquil, Golden Scepter. This is a hybrid between the Jonquil and a Large Trumpet Daffodil. It has a very large, exquisite, fragrant flower of deep golden yellow. 25c ea. \$2.90 doz.

Narcissus and Daffodil Mixtures. We have some "lost label" bulbs. As far as possible we will divide these into two classes since the Polyanthus Narcissus are not hardy in the far north.

Trumpet Daffodils. Assorted blooming sizes. This lot may contain some of the higher priced ones like Mrs. Krelage. A few Polyanthus may get in but we will try to avoid that. Price 90c doz.

Mixture of Leedsii, Incomparabilis and Barri Daffodils and Polyanthus Narcissus. Blooming sizes, 50c doz.

Nerine. This genus is seldom seen in America, altho it is one of the most beautiful and varied of the Amaryllids. Formerly *Lycoris radiata*, Red Spider Lily, was mistaken here for *Nerine sarniensis* and the error persisted for probably 40 years or longer. The influence of this error may still disguise the true *Nerines*.

They are fall or early winter bloomers. They can be grown in the south in gardens and are among the most desirable of bulbs for pot culture in the north. The soil should be slightly acid and it is usually necessary to add leaf mould and peat to a sandy loam both for pots and garden.

Many growers in Calif., both amateur and commercial, find difficulty in growing *Nerines* and often lose valuable bulbs. The trouble is too much alkali. The remedy is simple and sure. Give 50% peat to the soil and make sure they are well drained. Don't try to grow them where the water level is only a few feet under soil surface if soil is alkaline. But a raised bed might help. A few sorts are evergreen as indicated in descriptions. These need water the entire year. Others not indicated as "evergreen" rest usually thru the summer and in that period water should be entirely withheld.

Plant at a depth in proportion to size of bulb and with top of bulb at least an inch under surface. Give full sun exposure. When foliage of potted bulbs dies turn pots over on the sides until about Sept. 1. But don't forget that the bulb must have as long a period of growth after flowering as possible. Liquid manure will help to achieve a vigorous growth.

Nerine Bowdenii. About 10 or more large rose pink flowers in an umbel 9" across on a 15" - 18" stem or scape. One of the most choice and very easy to grow. This species is an exception in the culture requirements of *Nerines*. As it is almost evergreen it can be kept growing all summer. They may be dried off a little after flowering but need no long dormant period. Dry bulbs ready in Jan. \$1.00 and \$1.50 ea. In Nov.-Dec. we can send selected bulbs with a bud showing for \$2.00 ea. These require extra care in wrapping, more expense, hence cost more.

N. Bowdenii, Var. Pink Beauty. Larger and finer than *Bowdenii*, in fact the best of all *Nerines*. It grows luxuriously and increases rapidly. \$5.00 ea. Budded bulbs about Dec., \$6.00 ea.

N. filifolia. A lovely little *Nerine* with evergreen, grass like foliage. The carmine pink flowers on a 12" stem are fine for cutting. Plant a dozen bulbs in a 5" pot as they flower better when crowded. Bloom in Sept. Not because they are of little value but on account of their very rapid increase we are glad to be able to offer these at a very low special price. Delivery, anytime. 15c ea. 6 bulbs for 60c. \$1.00 per doz.

N. massonorum. The earliest of our *Nerines* to flower, sometimes in mid-July. Evergreen with grassy foliage like *N. filifolia*. The flowers also resemble it but are smaller and on a shorter scape. Rare but a good multiplier. Delivery, anytime, 50c ea.

Pancratium maritimum. Very fragrant, pure white flowers in shape like an *Ismene*. Bloom late summer to fall. **Culture.** Plant 4" deep in a sandy soil. Tender tropical bulbs. 25c ea.



**SPREKELIA FORMOSISSIMA
SUPERBA**

Sprekelia formosissima superba. We found this variety (described and named by Hayward in 1938 *Herbertia*) in an old California Garden. The flowers are about twice as large as the common type, a lighter and more pleasing red color. The foliage is evergreen and the flowers are so freely produced thruout the year that it almost deserves the title of an ever-bloomer. We call this the Orchid Amaryllis because of the orchid-like shape. Jumbo bulbs, 75c ea. M. 50c.

Tulbaghia violacea. A close relative of *Agapanthus*, but small enough to plant 3 in a 5" pot. Flowers are mauve to Chinese violet in an umbel on 24" stems. Begins soon after planting and blooms almost continuously thru the year—winter and summer. Foliage has garlic odor when bruised. 35c ea. 3 for \$1.00.

The Alliac. This group is now placed in the Amaryllis family. Sandy loam is preferred. Do not add too much leaf mould and no peat as very acid soil is not so good. Plant about 2½" deep. The species *Allium* are onions and should be grown in full sun unless noted.

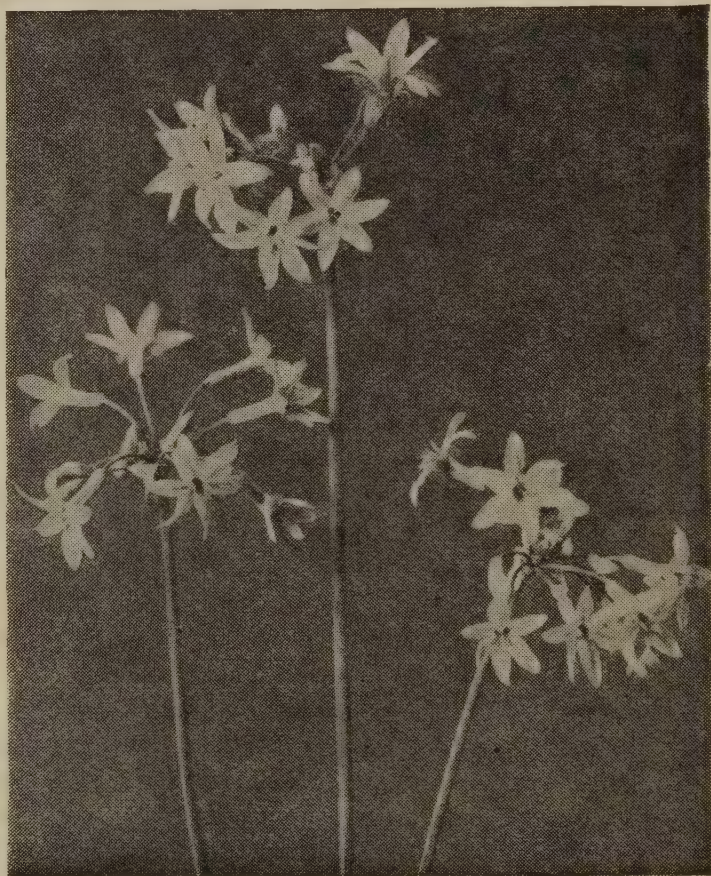
Allium flavum, var. pulchellum. One of the prettiest and most unusual of the ornamental onions. The 15" scapes carry an umbel of the loveliest lavender flowers. I have counted 135 flowers and buds in one umbel with more coming on. As these develop in succession thru a period of several weeks, with no disfiguring dry flowers to mar their beauty, their display is greatly extended. Should be planted in spring in cold climates. Delivery in mid-winter. 35c ea.

A. Neapolitanum grandiflorum. Many flowered umbel of pure white, dainty flowers on a tall stiff scape. Very pretty and easy. Plant 3 to 5 in a 5" or 6" pot 1" deep in early fall. Full sun. Fine in southern gardens. 3 for 25c. \$1.00 doz.

A. Neapolitanum, type. This is the unimproved wild plant. Late flowering but continues a long time. Interesting to plant collectors, and of ornamental value also. 10c ea.

A. sativum. Burbank's Elephant Garlic. This is the largest, juiciest and sweetest garlic and the easiest to peel. It often makes solid bulbs about 2" in diam. Others divide into very large cloves. Clusters of bulblets form at the base like *Gladiolus*. The flowers and plants are ornamental in the herb garden or border and give a delicious flavor to salads, etc. 15c ea.

A. Schoenoprasum. True Chives. Lovely little plants with lavender flowers, used



TULBAGHIA VIOLACEA

for edgings in the flower or herb garden and add zest to salads, stews. 10c ea. 4 for 25c.

A. senescens. Erect strap shaped leaves. Deep lilac flowers in a dense globular umbel. Very fine bloomer. 20c ea. 3 for 50c.

A. tuberosum, Oriental Garlic. A pretty Allium with white flowers. An ornament in the garden, indispensable in the herb garden. Leaves give a most delicious flavor to salads without the long-lasting high-powered after effect of garlic. In north, winter the plants in pots. They would probably grow in pots in the window all winter. Plants 25c ea.

A. triquetrum. Very fine white flowering allium. The many large flowers in a large umbel are pendulous. It does well in full sun like most alliums but even better in partial shade. 10c ea. 3 for 25c.

Brodiaea uniflora. Lovely porcelain blue flowers on a low plant. Usually grown in pots in the north but they are hardy in Ohio. **Culture,** like freesias. 4 for 20c. 45c doz.

Leucocoryne ixioides odorata. Glory of the Sun. New. Large, fragrant and very beautiful flowers in the early spring. Flowers are prized by florists and expensive. Hardy in south only. **Culture,** like freesias. 5 may be planted in a 5" pot. 10c ea. \$1.00 doz.

Bulbs for Christmas Presents

Bulbs are a solution to your Christmas shopping problem. Do you remember the difficulties recently? The crowds, the insufficient stocks, the makeshift products, plastics that should have been steel, etc.?

Probably at least 50% of the presents bought are not what the recipient would have liked. But most people like bulbs for their house and garden.

Our bulbs are all pre-war workmanship, perfect in design and material. Prices are not inflationary.

You don't have to stand in line or struggle with a crowd to get waited on. You sit down in a comfortable chair in your own home, make out your list and enclose your check. The postman delivers them. Simple and easy.

Why not order a dozen Amaryllis bulbs, Select Strains, one bulb for each of a dozen friends? Potted they will be worth \$1.50 ea. or more. Or give the dry bulbs.

Even the inexpensive Oxalis make wonderful little presents, especially if you pot them and get them started.

For birthday, Christmas or any day you wish to remember your friends with a present, nothing is more suitable than a bulb or bulbs.

IRIS FAMILY—Iridaceae

The **Iris** is the type genus of this family, which includes Iris, Gladiolus, Watsonias, Freesias, Sparaxis, Tritonias, Babianas, Moraeas, etc., as listed on following pages.

Tall Bearded Iris. We offer more than 100 fine modern Iris at reasonable prices in a special price list. Send for Iris Price List if interested.

Dutch Iris. These are bulbous Iris. The flowers are not fragile like Bearded Iris and they are therefore very useful for cutting.

Culture. They should be planted in the fall before Oct. 30 as the bulbs often deteriorate after that date. Later plantings may succeed if bulbs are good and not infested with plant lice. Plant 1 to 3" apart and 3 to 4" deep depending on size of bulbs. They are hardy in milder sections of north but a mulch is advisable. Full sun or slight shade.

Golden Lion. This is the finest of all yellow Bulbous Iris. Deep golden yellow, with frilled petals. It is the latest to flower. 25c ea. \$2.50 per doz.

Yellow Queen. Tall, deep golden yellow. 3 for 20c. 85c doz. \$6.00 per 100.

Blue Dutch Iris. We have 2 or 3 sorts but in small quantity. The variety sent will be labelled. 10c ea. 90c doz.

Assorted varieties. This mixture contains several besides the above sorts. 3 for 20c. 85c doz.

Gladiolus

Culture. Glads planted Nov. 15 to Mar. 1 in Southern California and thruout the south (a little later in Northern California and early as possible in spring in the east) are reasonably sure to escape the attack of thrips. Our Glad bulbs are especially grown for this purpose, matured early and dug in August. But if you plant recently dug bulbs you will gain nothing; they will continue their rest of three months before starting.

Thrips are very small insects that suck the juices from the plant. They cause the flowers to wither or appear burned, and appear only after weather becomes warm.

To avoid the damage they do, three measures are effective: Plant early; plant clean, treated bulbs; keep them always moist by overhead sprinkling. Gladiolus that are sprinkled one-half hour every evening will seldom show thrips damage at any time of year.

Treating bulbs. Mix 4 teaspoonsful of Lysol in one gallon of water. Soak the bulbs 6 hours in this solution. It may be used several times but not after standing over one week. This is an acid solution and encourages root growth instead of delaying it. Do not treat bulbs bought from us. We treat before selling. We do not advise use of mercurial solutions as they injure the bulbs and delay root formation.

Plant 4" deep; small 3"; bulblets 2". Twice their diameter apart. One can plant two rows, staggered in a 4" wide furrow or closer in a single row. Rows about 20" apart. Alkaline soils produce poor Glads. Soil should be neutral to mildly acid. Leaf mould or peat added is useful. Peat causes soil to dry out more rapidly and imported peat is hard to get. Domestic peat is often harmful because alkaline. Use no fresh manure, but well rotted manure is fine. Top mulch of leaf mould or imported peat is fine.

Keep Glads growing with plenty of water and best culture for at least two months after flowering. Longer is better for this is the period when new bulbs for next season are developing. It is best to dig bulbs in the south, and necessary in the north.

Sizes and Prices. L. means "large," size 1 and 2, 1¼" - 1½" (or more) in diameter. M. is "medium" and includes No. 3 and 4 sizes, ¾" to 1¼" diam. S. means "small," under ¾" diam. Large and medium bulbs give good long spikes. Small bulbs usually bloom in most varieties and when planted early, given good culture and plenty of water they usually make fairly long spikes. Early planted bulblets often flower. Large bulbs bloom earlier and throw more spikes. **Prices** are for one bulb as elsewhere in this catalog. A dozen, all of one sort, costs ten times the price of one unless otherwise stated. Six are sold at dozen rate. Don't forget **Sales Tax** in Calif.

Orders for Glads will be filled by Nov. or early Dec. in time for early planting. We suggest you order at once with remittance and be sure you get them as our stocks are limited.

Substitution. If you order early there is likely to be no substitution, but when out of a variety we send another as nearly like it as possible and of equal or greater value. If you do not approve this, request no substitution.

Albatros. Very large, pure white. Tall. L. 7c ea. 70c doz.

Allemania. Immense flowers on extra tall stem. Rosolane purple, popularly "orchid"; gorgeous. L. 10c ea. \$1.00 doz.

Annie Laurie. Beautifully ruffled, rose pink. L. 6c ea. Med. 4c.

Ave Maria. Early, tall large blue. L. 6c ea. 60c doz.

Bagdad. Tall, large, smoky old-rose. 6c ea. S. to M. 3c ea.

Betty Nuthall. Popular orange-pink. L. 6c ea. M. 4c.

Capeheart. New, salmon-rose. 6" flowers, 8 open at one time. Exhibition quality. L. 20c ea. \$2.00 per doz.

Chas. Dickens. Tall, large flowered, radiant purple. 8c ea. 80c doz.

Conquest. New, salmon and yellow. L. 20c ea.

Corona. Cream with pink picotee edge. Some think this the most beautiful Glad. L. 20c ea. \$2.00 per doz.

Debonaire. La France pink. L. 7c ea. 70c doz.

Dr. Moody. Early, large lavender pink. L. 6c ea. M. 4c ea.

Ethel Cave Cole. New. Exhibition quality. Tall, large flowered pink. Many open. L. 20c ea. \$2.00 per doz.

Golden Dream. Large deep, golden yellow. L. 6c ea. 60c doz.

La Paloma. Vivid bitter-sweet orange. Very early. L. 5c ea. 50c doz.

Libelle. Heliotrope blue. The finest blue as to color. L. 5c ea.

Los Angeles. Orange pink. Best winter grower. The most flowers from one bulb. L. 5c ea. M. 3 for 10c.

Margaret Beaton. New, exhibition type. Tall, pure white with scarlet blotch. L. 10c ea. \$1.00 doz.

Pelegrina. Very early, large deep violet blue. L. 5c. M. 3 for 10c.

Pfitzer's Triumph. Immense salmon-red. L. 8c ea.

Picardy. Tall, extra large flowers on a long spike. Universal favorite. L. 8c ea.

Radiant Orange. True brilliant orange flowers on a tall spike. 5c ea. 50c doz.

Rima. Pale lilac-rose. Exhibition quality. Large flowers on tall spike. 20c ea.

Sensation. New, huge deep pink. 20c ea. \$2.00 doz.

Shirley Temple. Large ruffled cream. 10c ea. \$1.00 per doz.

The Orchid. Individual flowers resemble a Cattleya orchid and make lovely corsages. Delicately lovely too in bouquets. 6c ea. 60c doz.

Virginia. No other red glad can compare in color. Unfortunately only very large bulbs make long enough spikes. 7c ea.

Wasaga. Apricot pink. 5c ea. 50c doz.

Wurtembergia. Clear scarlet with cream throat. 7c ea. 70c doz.

Mixed. We have too few of some sorts to list; accidental mixtures; lost labels, etc. All these go into this mixture. Bulbs 1" to over 1½", sizes 1, 2 and 3, 50c per doz. \$3.50 per 100. Size 4 and 5, ½" to ¾" diam., good bloomers, 30c doz. \$2.00 per 100. \$18.00 per 1000.

Watsonia

Close relative of the Gladiolus but winter growing and earlier in bloom. They grow as tall or taller. The flowers are smaller but in very lovely spikes useful for cutting. The colors are varied in most pleasing tones and bloom early if planted early. Better even the second and third years. Easy to have them for Decoration Day or before in Southern California. In most cases we have discarded names and substituted the name of their color.

Culture. About the same as Glads. In the south they must be planted in early fall (Sept. best) as the bulbs sprout early. Hardy at Washington, D. C., and probably in all climates where temperatures do not go below zero, if planted in a well protected place, 5" or 6" deep and well mulched.

Burbank's Lavender. Large lilac flowers. 8c ea. 75c doz. Per 100, \$6.00.

Ed Sturtevant. Grenadine or light orange scarlet. 8c ea. 75c doz. Per 100, \$6.00.

Liseran Purple. "Orchid." 8c ea. 75c doz. Per 100, \$5.50.

Rosolane Purple. "Orchid." 8c ea. 75c doz. Per 100, \$5.50.

Scarlet. 8c ea. 75c doz.

Marginata. A species uniquely different. Very tall, slender, straight spikes with small flowers surrounding the stem for as much as upper 3'. Many lavender tones. Fine in flower arrangements. 10c ea. \$1.00 doz. \$7.50 per 100.

White. Its pure white flowers make it the favorite Watsonia of many. 6c ea. 60c doz. Per 100, \$5.00.

Assorted Colors. This year we are moving some blocks of Watsonias and offer a bargain. A good mixture at 60c doz. \$3.50 per 100.

Watsonias at wholesale. Purple or "Orchid" Watsonias and the above fine mixture are offered at \$30.00 per 1000, f. o. b. La Verne. You pay express on arrival. Or will ship C. O. D. for postage. 250 will be sold at 1000 rate. This is a low wholesale price.

Freeseias

Freeseias are exquisite in beauty but their delicious fragrance is an appeal even stronger. Where they can be grown in the garden they are indispensable. They are easy forcers in pots and equally valuable for the window garden.

Culture. They are hardy only in the warmer sections of the south where temperatures do not go below about 26°. Plant outdoors early before Nov. if possible. They usually do well if planted in Nov. (we have planted in Dec. even) but the flower stems will be shorter, the flowers smaller. Plant our large bulbs 2" or 3" apart and 3" deep in the garden.

In pots they should also be planted early tho the shorter stems resulting from Nov. planting are not so objectionable. Use the regular potting soil, sandy loam and leaf mould or well rotted dairy manure. Be sure to give them a sunny window and a cool room if flowers are wanted. Warm rooms over 70° will produce long spindling foliage, but flowers may fail. The half inch bulbs will flower in pots but they are not so easy as the $\frac{5}{8}$ " to $\frac{3}{4}$ " size nor are the results quite equal. We advise large bulbs for pots. Set them 2" apart each way in a pot, about 6 in a 6" pot. Plant 1" deep.

Please note. We are offering only large bulbs this year, $\frac{5}{8}$ " to $\frac{3}{4}$ " diam. Smaller bulbs will flower in the garden and usually also in pots but these larger bulbs will give you more satisfaction either way. The increased number and size of the flowers will equalize the increased price.

The **Tecolote Hybrids** listed are a new giant race. The size of the flowers and the stem length equals many Baby Glads. They flower much earlier and are deliciously fragrant. If you plant them instead of Baby Glads you will be pleased.

Marie (Tecolote). Gorgeous, pure white Freesia. Deliciously fragrant. A giant in size. 20c ea. \$2.00 doz.

Talisman (Tecolote). Bright orange pink with cream throat. Like color of Talisman rose. 15c ea. \$1.25 doz.

Red Shades (Tecolote). 15c ea. \$1.25 doz.

Rose Shades (Tecolote). 15c ea. \$1.25 doz.

Pink Shades (Tecolote). 15c ea. \$1.25 doz.

Golden Daffodil. Pure daffodil yellow. 10c ea. \$1.00 doz.

Mary Louise Fischer. A new and better blue. 12c ea. \$1.20 doz.

Sparaxis

Sparaxis are closely related to Freeseias, but are far more colorful. The colors range thru vivid tones of bright red, crimson, carmine, pink, apricot and sometimes an almost white one. A few reds are almost maroon. There is usually a contrasting color in throat. They are a little taller than Freeseias and the flowers are larger, more flat and wide open. For pots, or winter flowers, few plants will create as much bright color as Sparaxis.

Culture like Freeseias. They are hardier. Must have full sun exposure and in pots they need a cool room 60° - 70° day time, cooler at night. Plant 6 bulbs in a 5" pot.

Houdyshel Hybrid Sparaxis. We have grown and selected seedlings from the original Dutch varieties and now have a much more colorful strain. The colors mentioned above are descriptive of this strain and we can add that occasionally one finds colors approaching yellow, or blue. 10c ea. 6 bulbs for 40c. 75c doz.

Small bulbs bloom well in the garden and even in pots they usually flower. Price 35c doz.

Sparaxis—Streptanthera hybrids. This is the same cross as the Bloem Erf hybrid Sparaxis. They are taller than Sparaxis and the colors run more into shades of orange. But you will find some pinks, reds and even white. 7c ea. 60c doz. Small bulbs, 30c doz.

Tritonias

Tritonias are also close to Freesias but taller. They are sometimes called Flame Freesias and are good bulbs for pots. **Culture** like Freesias and Sparaxis.

Tritonia, Red and Orange mixture. 10c ea. \$1.00 doz.

Tritonia lineata. This interesting species grows 18" tall. The flowers are white, crossed by grey lines, hence "lineata." 3 for 15c. 50c doz. We were fortunate in being able to dig a good crop of these and offer these **Wholesale** for \$3.50 per 100, postpaid.

Ixia

Ixias are 2 to 3 ft. tall. They have slender, wiry stems and are nice for cutting. The flowers close at night and on dark days but the long closed buds look like pink striped, oblong pieces of bright colored candy and sometimes I think they are prettier than the open flowers.

Culture. They are rather tender, winter growing bulbs for the south. If bulbs are bought in the fall and stored cool in the north one can plant as far up as Kan. or Missouri about Mar. 1, possibly a little later. They are hardy at Washington, D. C. Plant in full sun exposure. In every way the culture is similar to Freesias, Sparaxis and Babianas. **In pots** they are easy but should have a cool room and a sunny window. An unheated room where temperatures do not go below 30° at night and up to 50° or 60° during the day would be about right for this group of bulbs.

Ixias. Assorted Colors. Very showy in buds; shades to deep pink. 15c ea. \$1.00 doz.

Babianas

Blue flowers for the winter window garden are hard to find. **Babianas** are the answer. They are a vivid, intense blue to blue violet. **Culture** exactly like Freesias, Tritonias, Sparaxis and Ixias in pots or garden except they should be planted about twice as many in a pot or given space. Tho the bulbs are very small, they like to be planted about 3" deep in the garden and 2" in the pot.

Babiana hybrids. These are larger, stronger than the species. Most of them are vivid violet blue. Now and then one approaches purple. 6 for 40c. 75c doz.

Marica gracilis. Walking Iris or Apostle Plant. The fugitive 2" flowers, white and blue with yellow and brown markings in center, are lovely. The flowers are followed by a small plant at end of scape. These become heavy and bend over to ground and take root, thus walking away from mother plant. **Culture:** give nearly full shade, plenty water, never drying out. Tender tropical but grown in pots in north. 50c ea.

Marica northiana. Very similar but much larger and more rare. \$1.00 ea.

Moraeas. The Moraea tribe includes the genera Moraea and Dietes. All should be planted in the fall. The bulbous Moraeas may be planted like and given the same culture as Freesias. They do well in pots but only the smaller species should be used for that purpose. *M. ramosissima* is perhaps too tall and branching. All are tender bulbs for the south.

Moraea edulis. Only 6" tall. Leaves long and wiry. Flowers are combination of lilac, white and yellow. Clumps give a colorful effect in pots or rock gardens. 25c ea. 3 for 60c.

M. glaucopis. Peacock Iris. Flowers white to a light blue tint with a peacock eye in center. 10" to 15" tall. For pots, rock gardens or borders. 20c ea. 3 for 50c. \$2.00 per doz.

M. isopetala. Slender, branched plant 6" to 8" tall with butterfly like flowers of lavender, with a bright yellow spot. For pots, rock gardens or borders. 12c ea. 3 for 35c.

M. polystachya. Slender plants about 2 ft. tall. Many wiry branches covered with butterfly like flowers, in mauve with violet markings and a yellow eye spot. If you like the size it can be grown in pots. Tho a tender tropical like other Moraeas, it can be stored at 40° and planted in earliest spring. It has this fault for spring planting. It sometimes waits until fall to start and that is embarrassing to both of us. 15c ea. \$1.50 doz.

M. ramosissima. Much like polystachya but has amber yellow flowers with markings. About 4 ft. tall. Can also be planted in spring in the north. 15c ea. \$1.25 doz.

M. tristis. Rare and desirable for the unusual color of flowers which are a combination of olive green and grey with a small yellow, violet bordered eye. About 1 ft. tall. Spring blooming. 20c ea.

Dietes. This genus only recently has been removed from Moraea and given a new generic name. Dietes differ from Moraea in having a rhizome, similar to the Bearded Iris, and sword-like leaves. Flowers are very much like those of Moraea, borne on long wiry stems thruout summer into winter. **Culture** like Iris. Dietes are evergreen and they cannot be dried off. Plant at once and keep them wet or they will not start. The flower stems are perennial and should not be cut off as they flower year after year. They are not hardy where temperatures go below about 15°.

Dietes catanulata. Low growing species with waxy white flowers on a tall stem. 50c ea.

D. iridioides. White with yellow and blue markings. 25c ea.

D. iridioides Johnsonii. Flowers are about twice the diameter of the type variety above. Plant more robust. True variety. 50c.

D. Oakhurst Hybrids. New hybrids that soon make large clumps that are very ornamental in the garden. Flowers freely in summer with a few most of the time in winter. 2" flowers on 4' stems. 75c ea.

HOW YOU CAN HELP US

... to ship your orders more promptly. Like everyone else, we are short of labor. But we have plenty of bulbs of nearly all items and we think enough labor to dig and ship them. We may not be quite as prompt as usual but we will get the bulbs to you within the correct planting season.

Help us by not requiring us to write letters. Read first, "Terms and Instructions for Ordering," and comply. Order only bulbs as listed in this catalog, and only as specified in description. Use an itemized form for bulbs ordered. Be patient, if necessary. Do not inquire for bulbs not listed.

LILY FAMILY—Liliaceae

The type species is *Lilium*, or true Lily. Many call *Crinum*s, *Callas*, *Cannas* or any bulbs, "Lilies," but this is an error.

Lilium. This genus includes all true Lilies. **Culture.** It is better to plant all true Lilies in the fall altho one can plant the stem rooting sorts in the spring but with results not quite as satisfactory. They should be planted 4" to 6" deep in a good sandy loam. If underdrainage is not perfect, place a handful of coarse sand under each bulb and another around them. The soil should be mildly acid. There is only one species that will endure alkali and we do not list it. A great deal of humus, as leaf mould or peat should be mixed with soil. Lilies must have their feet cool and their head warm. Therefore planted among low shrubs or plants where tops are in the sun is ideal. They do very well in the half shade of trees or a lath house.

Lilium pardalinum giganteum. **Sunset Lily.** A very robust, easily grown Lily from Calif. Bright red with brown dots and yellow throat. Large bulbs, 60c ea.

L. regale. White with cream throat. Pink markings on reverse of petals. The standard garden lily. 20c and 30c ea.

L. Shuksan. Yellow background with maroon spots. 3 to 5 ft. tall. July-Aug. One of David Griffith's best hybrids. Plant 6" to 8" deep. Large bulbs. 75c ea.

L. Willmottiae. 5 ft. Orange-red, spotted brown. Medium size. 60c ea.

Roman Hyacinths. We have been lucky enough to have a few of our own and to be able to buy a few. Most of America's stock has previously come from Holland and France. American sources have become depleted.

Culture. Plant in full sun or slight shade in sandy loam. They are difficult to

grow in heavy soil unless lightened by very large additions of humus. Plant about 3" deep.

Roman Hyacinths. Assorted colors only. These are mostly blue and white. Price 25c ea. Better order early as we have only a few.

Muscari. Grape Hyacinths, var. Heavenly Blue. Racemes of closely placed, exquisite, tiny blue bells. Fine in pots or garden. L. 10c ea. 60c doz.

Scillas are closely related to Hyacinths. *Scilla hispanica* looks so much like Roman Hyacinths that they are often confused with them. All are useful in the garden or in pots and for cutting. All are hardy in the north except *S. peruviana*.

***Scilla hispanica* (campanulata). The Spanish Jacinth.** The former name "campanulata" should be dropped altho many catalogs continue to use it. We are almost out of stock of the common blue sort but have a giant blue variety that is much superior to any other named variety. All *Hispanicas* need half shade.

***S. hispanica*, Giant Blue.** This is much the largest of the *Hispanicas*. Deep blue color, large flowers on 12" stems. These are fine for cutting and bulbs may be grown in pots like Roman Hyacinths, which they much resemble. They are as good as Roman Hyacinths and considerably larger. Large bulbs 30c ea.

S. hispanica alba. A large white. Largest bulbs, 10c ea. 90c per doz.

S. hyacinthoides. One of the finest bulbs for the outside garden and it is perfectly winter hardy in north. It has a densely flowered raceme often 3 ft. or more in height. Plant in full sun. If early planted, in the south it will flower in late winter to spring. In the north about mid-summer. Flowers are very useful for cutting. The bulb is extremely hardy and a strong grower and will even recover when left out of the ground a year. Take my advice, plant it. Top size, 25c. M. 15c. \$2.35 and \$1.50 per doz.

S. peruviana. Here is another blue flowering bulb for your winter window garden, one that is easy to grow, sure to flower and makes a large display. The flower scape is short as it should be for a pot but flowers are well above foliage. The raceme is very broad,—often 6" or more, compact and oval to conical in form. Give the bulb a pot about twice it's own diameter. Set it with neck of bulb above soil, full sun exposure and in a cool room. This is the only tender *Scilla* that we list, but it is very nice in southern gardens where it survives the winters well up the coast lines and is hardy at Washington, D. C. Jumbo size for 75c ea. Medium for 50c.

***S. peruviana*, white.** These are less desirable than the blue but we have just a few large to jumbo bulbs for \$1.00 ea.

***S. peruviana* hybrids.** These are improved varieties in a great many shades of white, rose, lavender to deep blue. The colors cannot be specified as they are not marked. Price \$1.00 ea.

Ornithogalum arabicum. The showiest ornithogalum. The round glossy black ovary in the center of the white flower is a beautiful contrast. Flowers in a compact raceme at top of stem giving the appearance of an umbel. Tender. Easy in pots, blooming about Easter. L. 25c. M. 15c. Pot only large bulbs.

O. caudatum. A familiar pot plant in the north which is commonly but erroneously called "Sea Onion." The foliage and flowers are pretty but not outstanding. L. 50c. Jumbo, 75c.

***Lachenalias*, or Cape Cowslips,** furnish bright colorful flowers from before Christmas to February and later. They are small plants, usually one or two leaves. Flower scape 6" to 12" tall, with 12 to 24 tubular flowers about 1" long. For early flowers start them early in September and in no case delay beyond late October to plant. Leaves and stems are sometimes gaily spotted and decorative. **Culture.** Easy outside in mild climates and force easily in pots in the house. Plant in full sun, 2" deep and 2" apart. Several can be planted in a pot at about 2½" apart. They may be grown outside or in flats and potted when in full bloom. When tops die, dig bulbs and store dry. They rot easily in the ground if moisture is received when dormant.

Lachenalia aurea. Beautiful, large golden yellow, pendulous flowers, tubular in shape. A bright and cheerful pot plant for Christmas. 25c ea. 3 for a 4" pot, 65c.

L. pendula superba. Brilliant coral red, tipped green and purple. A red Christmas flower in pots or the garden in deep south. 25c ea. 3 for 65c.

Veltheimia viridifolia. Neither a picture nor words can accurately portray the beauty of this plant. For foliage alone it is superb. The vivid glossy green leaves are wavy margined and form a nice rosette. In pots, or in the garden in So. Calif. and other mild climates, it is in bloom by Dec. 15 and continues for about three months as large bulbs send up two or more spikes. The tubular, drooping flowers are densely placed on a long raceme. The color is a deep rosy or purplish pink of ineffable tones not found in any other flowers.

Culture is very easy. It prefers a sandy soil to which peat or leaf mould has been added. In pots the drainage should be perfect. They must be ordered early as nothing holds them back. Best to order before Sept. 15 or Oct. 1.

Specially priced. 50c ea. \$6.00 per doz. Extra large bulbs—75c, \$1.00 and \$1.50.

Tulips

Last mentioned, but not least desirable are Tulips which we have not recently listed. Our reason was that we could sell our flowers for more than a reasonable price for bulbs. We were one of a very few growers near Los Angeles who had a stock. Selling the flowers only, saved the cost of digging and replanting and we did not have the labor to do that anyway.

But we managed to get them dug this year and we will share them with you. We do not have enough to last thru the season, so if you want them at the necessarily higher price, order very early. We can deliver by October.

Culture. Plant Tulips from 4" to 6" deep in rich sandy loam. They do well in heavy soil like our own but you must add a very large quantity of humus in the form of leaf mould and thoroly decayed old manure. Fresh manure just before planting is deadly to most bulbs. It is best to spade it all in and thoroly mix 2 or 3 months before planting. Dried and powdered dairy or sheep manure is reasonably safe when thus added in advance.

We have been very fortunate in getting good growth of plants and bulbs and good flowers because we keep them very wet. We try to imitate Oregon climate where it rains nearly every day and Tulips do so very well. I suggest you plant in moist soil in Oct. and in two weeks give a good watering. Rake over soil surface when dry enough and water again in about 2 weeks. Keep them definitely wet all winter and spring thruout the growing season. Keep them growing as long as they will grow. Nearly all our reports of failure could be traced to lack of sufficient watering. There is never half enough rain, during the entire season to grow Tulips in So. Calif. Remember that Tulips are growing for several months before they are above ground. That period is a critical one for them.

Tulips. Assorted colors and varieties only. This is a fairly well balanced mixture. Our largest bulbs, a few go to 1½" diam., \$1.50 doz. Our second size, a good blooming size, from a little under 1" to a little over, \$1.00 doz.

OXALIS FAMILY—Oxalidaceae

There are two types, the winter and the summer growing. The summer growing species are listed in our spring catalogs. The following are all winter growers. These are the brightest and most vivid of winter flowers for a sunny window or in the garden in the south. They give a profusion of bloom over several months period. A bed looks like a carpet of solid pink, rose, white, yellow, etc. The flowers are large, some over 1" diam.

Culture. Plant about 2" deep, 3" apart. Large bulbs may be farther apart and a little deeper. In pots, the smaller may go 6 in a 4" pot. Use good rich soil, altho they will grow in any soil. Give full sun exposure as they open only in full sun and close at night. Order and plant early as they begin to sprout even in August. But they may be shipped even with long sprouts up to mid-October.

Oxalis Bowiei. A large plant with bright rose red flowers. 3 bulbs to a 5" pot. 5c ea. 50c doz. \$3.75 per 100. Largest size 10c ea.

O. cernua. Bermuda Buttercup. Deep golden yellow flowers. Very profuse. 3 for 10c. 35c doz. \$2.50 per 100. Largest size, 10c ea.

O. Grand Duchess. Low growing plants, but give a profusion of very large flowers in three colors. The **Pink** and the **Lavender** varieties are 5c ea. 45c doz. \$3.00 per 100. **White** 7c ea. 60c doz. \$4.00 per 100. Jumbo sizes 10c ea.

O. Hirta. One of the finest winter Oxalis, and most unusual as it makes a leafy stem that to some extent falls over and will trail down the sides of a pot. Nice for hanging baskets. The flowers are deep rosy red. Super jumbo bulbs, diam. 1" and up, the best blooming size for pots, 25c ea., \$2.00 per doz., \$12.00 per 100. L. 15c ea., \$1.25 per doz., \$9.00 per 100. M. 10c ea., 85c doz., \$5.00 per 100. S. 5c ea., 40c doz., \$3.00 per 100. Smaller sizes are likely to flower under ideal conditions only, but otherwise not too sure.

Oxalis Special. The bulbs offered in this lot are assorted in size but some are small. They will all flower well. Some are accidentally mixed, others are surplus. Price 30 for \$1.00.

THE ORCHID FAMILY

The word **Orchid** is the synonym of floral beauty. The Lily, the Rose and the Amaryllis all have their devotees, but all admit that nothing in floral beauty can surpass that of Orchids. But the growing of most Orchids is an expensive luxury. The Cattleyas cannot be grown even in an ordinary greenhouse but require a special house, correct in temperature and humidity. Only an experienced specialist can grow them. The following orchids are not too difficult in pots in the north or in the outside garden in the south where minimum temperatures do not go much below 27°. Even at that temperature, if long continued they should be covered. Where temperatures descend to an occasional low of 20° - 24° one must be prepared with boxes, cartons, etc., and do a thoro job of covering.

Epidendron O'brienianum. The tall stems grow to a height of 3 ft. or more, are slender and require the support of adjoining plants or stakes. As the plant grows it produces terminal clusters of flowers thruout all the year when warm. This large cluster is composed of many small brilliant red flowers of a typical orchid form. Below each cluster as it withers, a lateral bud develops and continues the upward growth. At its base aerial roots develop. Propagation is effected by planting these air-rooted branches.

Culture. Epidendrons need a warm, almost full sun exposure and constant but not excessive moisture. They will grow in well drained sandy loam soil containing some gravel but it is better to incorporate 50% leaf mould or 35% or more peat for a distance of a foot around and under the plant.

Price of E. O'brienianum: cutting with aerial roots, 75c. Small clump, \$3.00.

Cymbidiums are immensely popular in So. California. Many are grown in greenhouses in England and we must admit the English have high appreciation for floral values.

The large 4" to 6" flowers are borne on a stem often 4 ft. long, and from 12 to over 30 in number. Well established plants may give 4 or more and large clumps up to 35 stems. The flower spikes remain in perfect condition for 8 to 12 weeks. The cut flowers have unsurpassed lasting qualities and may be used many times in a corsage if kept in a refrigerator between times. Florists retail the flowers for only a little less than Cattleyas.

The flowers are of typical orchid form and in a wide range of colors. It is impossible to give accurate color descriptions of hybrid Cymbidiums as the hybrid is named from the cross and may include several seedlings not necessarily identical, tho close. Descriptions are usually only approximate but not always even that.

Culture. Cymbidiums are terrestrial orchids from India and Burma where they grow in the moist atmosphere of mountains and foothills in perfectly drained situations.

The culture is easy enough if you note carefully our instructions. But you can't plant them and forget them. The shade of a lath house, lath spaced 1" apart, 50% shade, is about right. They do well in this exposure, or even a little more sun in our hot inland valleys and in cooler coastal regions the lath may be farther apart. The shade of trees giving filtered light and full sun in early morning or evening suits them well. They do well in a sandy or gravelly loam of acid reaction. In preparing our soil we dig to a depth of 10" and the same distance on each side of plant. We fill this hole with peat or peat and leaf mould. This is thoroly mixed with the soil thrown out, wet a little and pressed down. The elevation resulting may be rounded over on sides.

The base of the plant is enlarged into a pseudo-bulb, surmounted by the foliage. This bulb must not be covered by soil. Insert it to a depth of only about $\frac{1}{3}$ of its length. The plant may need support until roots form.

Set the plants in moist soil and water after planting to settle soil around them. At first, they must only be kept moist until roots have developed. If moisture is excessive the pseudo-bulb will rot and the plant is lost. In warm weather, when plant is in full growth they will use more moisture. We sprinkle then a little every day or two. They make scant growth if allowed to become dry between waterings. But at no time should they be kept in a soggy condition. Provision must be made for perfect drainage in pots or garden.

Customers are sometimes alarmed if the roots of plants appear dead when received or if roots have been removed. When *Cymbidiums* are moved, the roots usually die back to the pseudo-bulb. Roots usually start in about 6 weeks if you treat plants as advised.

Sometimes when moved, the inexperienced grower neglects his plant a little and the foliage dies. This is not fatal. The pseudo-bulb has only become a back bulb. The foliage will never be replaced but a new plant will start at base of bulb in from 2 to 6 mo. if you keep it moist.

In Pots, they are reasonably easy. They can be grown in the same compost as required by *Begonias* or in soil as we described for outdoor culture. Give them a warm situation, not as cool as most plants require. We suggest an 8" or 10" pot. They can be set in an 8" pot and shifted when necessary.

The plants we offer consist of a single pseudo-bulb and foliage. They should flower in two years with correct culture. We have had less than 1% flower in a year or less, tho it can happen. Even large plants when moved without soil require a year.

We send out only good plants. We have been held responsible for plants that died from no water at all and from too much. We cannot longer accept responsibility for wrong handling.

We ship by prepaid parcel post but we do not accept responsibility for freezing in transit to the north. You can avoid this risk by asking for delivery after April 1, or have them shipped by express, f. o. b.

Cymbidium Prices are up. We have been doing a nice business in *Cymbidiums*. There was one discouraging feature. We could never get stock enough to propagate our own plants. We always had to buy. We would start the season with our 30 x 90 ft. lath house full of plants; sell out by end of the season, with mostly the back bulbs and a few high priced sorts left on hand. Other dealers sold as many or more. Result: The large growers have sold out and I can get no more. There are none in prospect for about 2 or 3 years.

In the following list, I have only a total of 150 large plants and about the same number of 1 year old small bulbs started from back bulbs. The latter are from 3" to 6" tall and I would not expect them to flower for about 3 years, tho some might.

Butterfly. Yellow to buff with red lip. \$12.50.

Doreen. Greenish orange, yellow lip, spotted purple. \$12.50.

Giganteum. A robust, large plant. Flowers are smaller than some but as they are first to flower they have no competition. \$12.50.

Insigne. White, flushed pink to deep rose pink. Very small plant. Thus well

adapted for growing in pots. One year old plants with back bulb attached. Single plants, \$7.50. Double plants (two plants on one back bulb), \$10.00.

Moir. Shades of cream and yellow with crimson and purple markings on lip. \$15.00.

Veitchii. This species grows vigorously and multiplies rapidly. It has very pretty, large flowers with the fault of having few flowers on the stem. \$8.50.

Winter Cheer. Cream with pink dots and veins. Red dot on lip. \$12.50.

Zebra. Tall, robust plant. Pink flowers. \$15.00.

Assorted varieties. These are small, 1 yr. old plants attached to back bulbs. The bulbs were from a well known eastern cut flower grower who had some very good imported varieties. He refused to label bulbs hence no name attached to these. Single plants, \$6.50. Doubles (on one back bulb), \$8.50.

THE CALLA LILY FAMILY—Araceae

This family contains the so-called Calla Lilies or Zantedeschia, Black Callas and other Aroids.

Culture. All Zantedeschias and *Arum palaestinum* are suitable for pot culture. *A. palaestinum* will start about September or later. Do not put this bulb into moist soil before that or it will rot. Zantedeschias—pink, yellow and spotted leaf—may be potted by about December 15. Don't rush them as too much water before they start to grow may rot them. They may be held back and started in early spring, here in late February. All do well in the garden in a moist semi-shaded cool place. They are not hardy in cold climates; dig in fall. The White Calla usually blooms in California in the garden in late winter. They may be planted in early fall in pots or garden. All do best in mildly acid soils, on sandy side.

It is an error to keep large White Callas growing continuously. If rested thru summer you will be rewarded with flowers. A rest brings flowers when they start again, often twice or more in a year. The Baby Calla should not be allowed to lose its foliage. Callas as pot plants need some sun, plenty of light and like all plants, good ventilation.

Zantedeschia aethiopica, var. Baby Calla. This is the smallest and whitest Calla. Small enough for corsage. We send small bulbs as the large bulbs make larger flowers, approaching in size those of Godfrey. For tiny 1" flowers replant your small bulbs. 20c ea., 3 for 50c. \$1.50 per doz.

Z. albo-maculata. Spotted leaf-calla. The prettiest foliage of all and worth growing for that alone. Endures sun best. Flowers, creamy white with dark throat. 25c ea.

Z. elliotiana. Pure golden yellow flowers. Requires more shade than others, but give potted bulbs part sun. 20c ea., 6 for \$1.00. Larger bulbs 25c and 35c ea.

Z. rehmanni, var. elegans. This variety has light pink flowers of a lovely shade that many like better than the darker colored type var. It is taller, larger and a better grower. More easy also to force in pots, but when forced many report they produce white flowers. Even in the garden some flowers are white with shell pink tints. But the white ones are still lovely, more so than the white *Aethiopica*. Large bulbs, 75c ea.

Arum palaestinum. Black Calla or Solomon's Lily. Foliage and flower like callas. Really black. Plant 4" deep and not before September 1. If not kept perfectly dry until that time the bulbs rot. Flowers in February in pots or in the garden in the south. No bad odor. Best in half shade. L. 75c and \$1.00.

A. italicum. Has attractive green leaves, veined in a light color. The flower spathe is long, inflated, ivory white. No "perfume." 50c to 75c ea.

A. Maculatum. Like *A. italicum*, except plain green leaves and larger bulbs. 50c, \$1.00 and \$1.50 ea.

Dracunculus vulgaris. Rich tropical foliage and huge black purple flowers. Carrion odor. Jumbo bulbs, \$1.00 to \$1.50.

See Spring Catalog for other Aroids.

RANUNCULUS—Ranunculaceae

This year we have been able to buy the finest and largest Ranunculus we have ever seen. Usually we have listed #3, small bulbs. They seldom grow 100% and require more careful attention. So many fail with #3 that we decided to list nothing but Jumbo bulbs,—about 1" in diameter. Most growers would call them Super-jumbo in size. Altho more expensive than small bulbs, one gets just about as many flowers for the price of \$1.00 from the Jumbo bulbs as from the smallest and cheapest size. The bulbs are easier to grow; give longer stems; better and more double flowers; bloom earlier. Jumbo bulbs may throw as high as 20 or more flower stems.

Large bulbs force well in pots while small ones do not and often do not flower at all. You will be pleased with the big bulbs either in the garden or in pots.

Culture. Best time to plant is from Sept. to Feb. One can plant directly in a pot or the garden but best germination is secured by placing bulbs in a flat in a cool shady place. In So. Calif. that place may well be under the shade of a large tree. They should be cool when sprouting and our fall "hot spells" are their worst enemy. After sprouting, they will endure more heat. Most of them will sprout within a week or 10 days. When sprouted, set the bulbs in the pots or garden. Plant 2" or 3" deep. In the garden this size may be planted a foot apart. Give a 6" pot, for house culture. The secret of success is to grow Ranunculus under cool conditions. In the house the night temperature must not be above 45° and 30° is better.

The best soil is rich, sandy loam to which has been added about 10% thoroly rotted and composted manure. One may add some leaf mould. Perfect drainage is essential. Water lightly until growing well, then give plenty and occasionally some weak liquid manure. Give potted bulbs plenty of light and good ventilation.

Giant Double Ranunculus, Jumbo Bulbs, 20c ea. \$2.00 per doz. \$12.50 per 100.

BILLBERGIAS—Bromeliaceae

Billbergias have a rich, tropical appearance with the showiest inflorescence. In both foliage and flowers they are most unusual and most lovely. The foliage is stiff and erect, forming a cup. They are tender tropicals that are easily grown in pots but do well outside in So. Calif.

Being epiphytes they should be rooted in almost pure leaf mould, wood earth (rotted wood), peat or sphagnum moss mixed with a little sand for greater substance. But they do quite well in half sand and half leaf mould or peat. Here they need half shade, but in the house, a sunny window is usually right. Sun brings out rich colors of foliage but don't overdo the sun exposure as it may burn the leaves and prevent their functioning. The "cups" should hold a drink when growing. In the winter they rest and when you start them in winter do it "easy like." Not too much water until will rooted and growing but never allowed to dry out.

Billbergia nutans. The earliest to flower, often late Dec., usually in Jan.-Feb. The inflorescence is most beautiful. Price 50c. With bud showing, \$1.00.

B. distachia hybrid. Foliage reddish green with cream spots. Long spikes with rose pink bracts and blue margined green flowers. Blooms in early spring and a few in late summer. \$1.00.

B. rubro-cyanea. The foliage has very rich variable markings of green, red and white. Flowers green, edged dark blue with crimson bracts. To bring out the rich colors of the foliage give some sun exposure. The more sun received, the finer will the colors be. But guard against too much sun which would burn and injure foliage and stop growth. \$1.25 ea.

Gloxinias

Tuberous Begonias, Fancy Leaf Caladiums, Gloriosas, Ismenes, etc., will be listed in our Spring Catalog. More varieties than ever before. None of these can be planted before Feb.